

City of Columbus
Department of Public Service
Division of Design and Construction

Subdivision (Private Development) Sample Plan Sheets

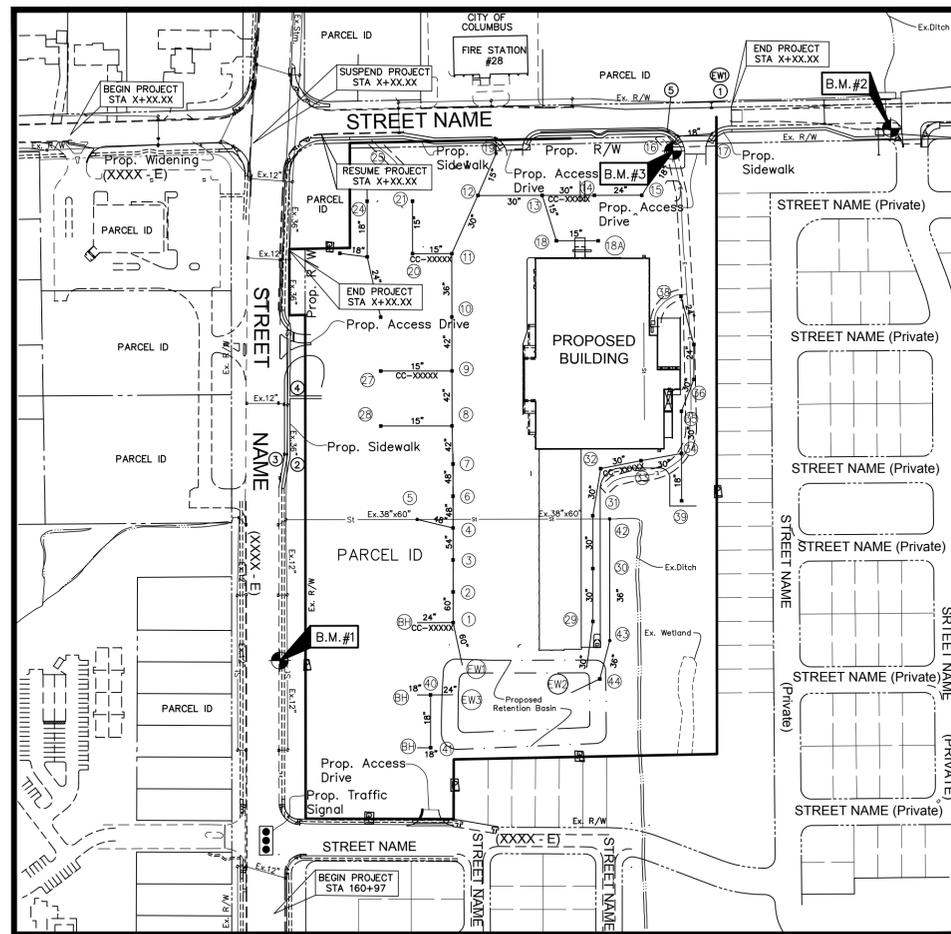


CITY OF COLUMBUS, OHIO
 DEPARTMENT OF PUBLIC SERVICE
 DIVISION OF DESIGN AND CONSTRUCTION

IMPROVEMENTS OF NAME OF STREET

FROM A POINT XX' EAST OF XXXXX RD
 TO A POINT XX' WEST OF XXXXX RD

PROJECT NAME



INDEX MAP
SCALE:

SITE COMPLIANCE PLAN XX345-XXX
 STORM (PRIVATE) CC#XXXXX
 SANITARY (PRIVATE) CC#XXXXX
 WATER SERVICE WSP#XXXXX

ZONING

Development Name: NAME
 Zoning Case Number: Zxx-xxx
 Zoning Address: ADDRESS
 City Council Ordinance Number: xxxxx-xxxxx

ODOT STANDARD CONSTRUCTION DRAWINGS	COLUMBUS STANDARD CONSTRUCTION DRAWINGS	SUPPLEMENTAL SPECIFICATIONS
MT-35.10 x/x/xx	1441 x/x/xx AA-S102	SS-1551 x/x/xx
MT-95.41 x/x/xx	2000 x/x/xx AA-S107	SS-1630 x/x/xx
MT-101.70 x/x/xx	2203 x/x/xx AA-S133	
	2300 x/x/xx AA-S120	
	2319 x/x/xx	



Drawer Number to be placed on every plan sheet. Assigned by City of Columbus Division of Design and Construction. Text height = 0.24" Style = Arial (Bold)

Either for Page Numbering Style

1
74

XXXX - E

1
74

INDEX OF SHEETS

(Information and/or sheets in the plan shall be located in order indicated.)

TITLE SHEET	_____	#
TYPICAL SECTIONS	_____	#
GENERAL NOTES	_____	#
ESTIMATE OF QUANTITIES	_____	#
MAINTENANCE OF TRAFFIC (NOTES AND PLAN DETAILS)	_____	#
STORM WATER POLLUTION PREVENTION PLAN	_____	#
DEMOLITION PLAN	_____	#
PLAN & PROFILE (STREETS)	_____	#
CROSS SECTIONS (NEW STREETS OR WIDENING EXISTING STREET)	_____	#
DETAILS	_____	#
STORM SEWER PROFILES	_____	#
SURVEY COORDINATE DATA - STORM AND WATER	_____	#
PAVEMENT MARKING AND SIGNING PLAN	_____	#
TRAFFIC SIGNAL & TRAFFIC SIGNAL INTERCONNECT	_____	#
LIGHTING	_____	#
LANDSCAPING	_____	#

PROJECT DESCRIPTION

GIVE BRIEF DESCRIPTION OF RIGHT-OF-WAY IMPROVEMENT.

OWNER

BUSINESS ENTITY NAME
 ADDRESS CONTACT
 PHONE EMAIL

DEVELOPER

BUSINESS ENTITY NAME
 ADDRESS CONTACT
 PHONE EMAIL

BENCH MARKS

Note: a copy of the Bench Circuit shall be included with the INITIAL submittal for plan review.

VERTICAL CONTROL

Vertical control is set using (note the County or City certified) source monuments(s), based on the North American Vertical Datum of 1988 (NAVD 88). (Provide source data detail and correction factor.)

BENCHMARK	DESCRIPTION	NORTHING	EASTING	ELEVATION
Source Benchmark	Monument 1 Official Name, Description	#####	#####	#####
⊕ TBM #		#####	#####	#####
⊕ TBM #		#####	#####	#####
⊕ TBM #		#####	#####	#####

HORIZONTAL CONTROL

Horizontal Controls are tied to Franklin County Survey Monuments, based on Ohio State Plane Coordinate System, South Zone, NAD 83 (2007 NSRS Adjustment). (Provide source data detail and correction factor.)

CONTROL POINT	DESCRIPTION	NORTHING	EASTING	ELEVATION
Source Monument	Monument 1 Official Name, Description	#####	#####	#####
Source Monument	Monument 2 Official Name, Description	#####	#####	#####
▲ # 1		#####	#####	#####
▲ # 2		#####	#####	#####
▲ # 3		#####	#####	#####

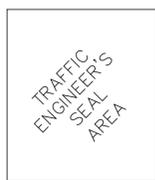
BASIS OF BEARINGS

THE BEARINGS SHOWN HERON ARE ESTABLISHED ON THE CENTERLINE OF STREET NAME AS BEING NORTH XX' XX' XX" EAST, FROM ADJUSTED FIELD SURVEY USING G.P.S. METHODS ORIGINATED FROM MONUMENT NAME 1 AND MONUMENT NAME 2, BASED ON THE OHIO STATE PLANE COORDINATE SYSTEM, SOUTH ZONE AND NORTH AMERICAN DATUM 1983 (NSRS 2007).



ENGINEER

FIRM NAME
 ADDRESS CONTACT
 PHONE EMAIL

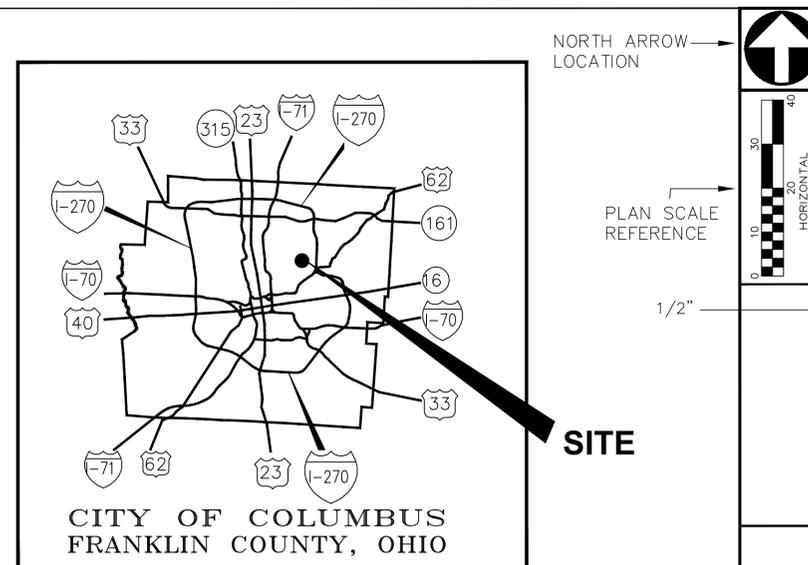


BMP Water Quality Note.

Site Earth Disturbed Area.

REGISTERED ENGINEER

DATE



LOCATION MAP

2018 SPECIFICATIONS

THE CITY OF COLUMBUS CONSTRUCTION AND MATERIALS SPECIFICATIONS (CMSC), 2018 EDITION, INCLUDING ALL REVISIONS AND SUPPLEMENTS IN EFFECT AT THE TIME OF SIGNATURE BY THE DIRECTOR OF PUBLIC SERVICE, SHALL GOVERN ALL CONSTRUCTION ITEMS THAT ARE A PART OF THE PLANS UNLESS NOTED OTHERWISE.

CITY OF COLUMBUS APPROVALS

CITY OF COLUMBUS SIGNATURES ON THIS PLAN SIGNIFY ONLY CONCURRENCE WITH THE GENERAL PURPOSES AND GENERAL LOCATION OF THE PROJECT. ALL TECHNICAL DETAILS REMAIN THE RESPONSIBILITY OF THE ENGINEER PREPARING THE PLANS.

CITY ENGINEER/ADMINISTRATOR DIVISION OF DESIGN AND CONSTRUCTION	DATE
ADMINISTRATOR, DIVISION OF POWER	DATE
ADMINISTRATOR, DIVISION OF SEWERAGE AND DRAINAGE	DATE
ADMINISTRATOR, DIVISION OF WATER	DATE
DIRECTOR, DEPARTMENT OF RECREATION AND PARKS	DATE
FIRE PREVENTION BUREAU, DIVISION OF FIRE	DATE

REV NO	REVISION DESCRIPTION	SHEET(S)	INITIAL	DATE

TITLE SHEET

PROJECT NAME

1
74

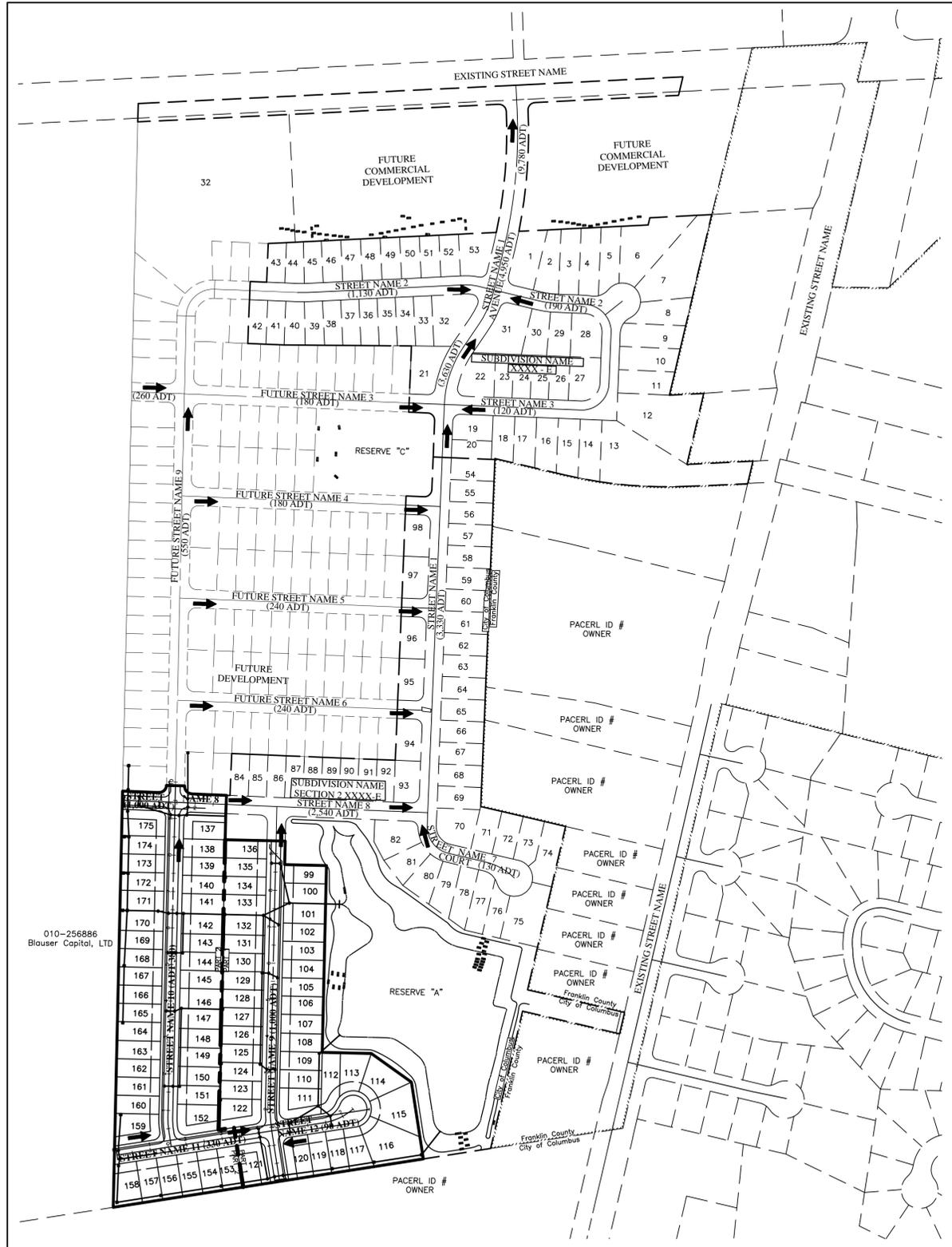
j:\Design and Construction\Design\Plan Review\Sample Sheets (E-Plan)\CAD Drawings\02_02 TITLE SHEET (PRIV-Com).dwg
 REVISED 1/22/19 FILE NAME, SUBMITTAL DATE

OUTSIDE EDGE OF SHEET

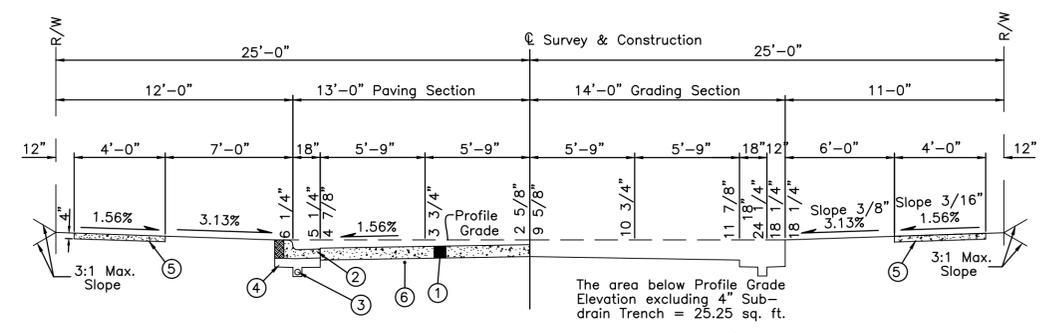
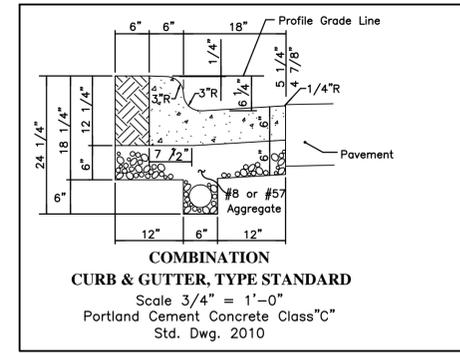
INSIDE BORDER

OUTSIDE EDGE OF SHEET

Revised 6/25/14
 J:\Design and Construction\Design\Plan Review\Sample Sheets (E-Plan)\CAD Drawings\04_03 TYPICAL SECTION-ADT.dwg (TypSect (PRV-Sub))



ADT EXHIBIT
 Scale 1" = 200'



TYPICAL 26' SECTION (50' R/W) W/ COMBINATION CURB & GUTTER
 Scale 1" = 5'

STREET NAME 8 (1,000 ADT) (725 SY) ☉ STA 0+00.00 to 2+85.50	STREET NAME 9 (1,000 ADT) (2,535 SY) ☉ STA 0+00.00 to 9+38.53
STREET NAME 12 (90 ADT) (950 SY) ☉ STA 0+00.00 to 2+72.82	STREET NAME 10 (380 ADT) (2,280 SY) ☉ STA 0+00.00 to 9+10.91 ☉ STA 9+78.13 to 9+90.34
STREET NAME 11 (330 ADT) (PART 1 - 180 SY, PART 2 - 925 SY) ☉ STA 0+00.00 to 4+38.08	

- PAVEMENT LEGEND (STANDARD CONCRETE PAVEMENT)**
- ① Item 452 7" Non-Reinforced Portland Cement Concrete Pavement
 - ② Item 609 Combination Curb & Gutter, Type Standard
 - ③ Item 605 4" Underdrain
 - ④ No. 8 or No. 57 Aggregate. (Also used for replacement work)
 - ⑤ Item 608 4" Concrete Sidewalk
 - ⑥ Item 204 Compacted Subgrade

NOTE TO CONSULTANTS
 Refer to City of Columbus
 Pavement Design Policies and
 Standard Drawings for pavement
 design.

ADT EXHIBIT
TYPICAL SECTION

PROJECT NAME

XXXX-E

CALCULATED
CHECKED

HORIZ. SCALE
As Noted

**'ITEM SPECIAL' NOTES - INCLUDE ONLY IF APPLICABLE
[CIP] OR [PRIV DEV]**

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EXAMPLES:

STONE CURB TO BE REMOVED AND SALVAGED

THE CONTRACTOR SHALL REMOVE, SALVAGE, AND DELIVER TO THE CITY OF COLUMBUS THE STONE (SANDSTONE, GRANITE) CURBING FROM THE EXISTING STREETS AS DIRECTED BY THE PLAN. THE CURB SECTIONS SHOWN ON THE PLANS TO BE SALVAGED SHALL BE CAREFULLY REMOVED WITHOUT NECESSARY DAMAGE AND CLEANED FOR RE-USE. STRAIGHT CURB SECTIONS TO BE SALVAGED SHALL BE AT LEAST FOUR FEET IN LENGTH. CURVED SECTIONS OF ANY LENGTH SHALL BE SALVAGED. ALL CLEANED CURB SECTIONS SHALL BE STACKED (NO MORE THAN FOUR HIGH) AND SECURELY FASTENED OR BOXED ONTO PALLETS.

WHEN THE CURBING HAS BEEN SECURED ONTO PALLETS, THE CONTRACTOR SHALL TRANSPORT IT TO THE CITY OF COLUMBUS, DEPARTMENT OF PUBLIC SERVICE - 25TH AVE. STREET MAINTENANCE YARD. THE CONTRACTOR SHALL CALL THE MAINTENANCE YARD MANAGER @ (614) 645-8120 AT LEAST TWO WEEKS IN ADVANCE TO MAKE ARRANGEMENTS FOR DELIVERY. PAYMENT FOR THIS WORK SHALL BE MADE AFTER THE CURBING HAS BEEN DELIVERED TO THE 25TH AVE MAINTENANCE YARD.

THE COST FOR ALL WORK REQUIRED TO REMOVE, CLEAN, SALVAGE, AND DELIVER CURBING SHALL BE INCLUDED IN THE UNIT BID PRICE FOR ITEM SPECIAL - CURB REMOVED FOR STORAGE - L.F.

ASPHALT CONCRETE PATCHING

THIS ITEM IS TO BE USED AS DIRECTED BY THE ENGINEER, WHEREVER AND WHENEVER IT BECOMES NECESSARY, IN THE OPINION OF THE ENGINEER, TO ALLEVIATE HAZARDOUS SITUATIONS, SUCH AS MANHOLE CASTINGS, VALVE CASTINGS, AND OTHER HAZARDOUS CONDITIONS THAT MAY EXIST. EACH SEPARATE AND DISTINCT AREA WHICH REQUIRES THIS ITEM WILL BE PAID AS ITEM SPECIAL - ASPHALT CONCRETE PATCHING - CY.

INCLUDE PROJECT SPECIFIC NOTES FOR PLANS AS APPLICABLE

A PROJECT SPECIFIC NOTE IS A 'CUSTOM' NOTE THAT IS UNIQUE TO EACH INDIVIDUAL PLAN. IT IS TYPICALLY USED TO CONVEY INFORMATION AND/OR DETAIL CONCERNING WORK ASSOCIATED WITH THE PROJECT.

EXAMPLE:

SOILS INVESTIGATION

GEOTECHNICAL REPORTS HAVE BEEN PREPARED FOR THIS PROJECT. COPIES OF THESE REPORTS MAY BE OBTAINED FROM THE DIVISION OF DESIGN AND CONSTRUCTION.

INCLUDE OTHER AGENCY NOTES FOR PLANS AS APPLICABLE

POWER

THE DIVISION OF POWER HAS (PRIMARY OR STREET LIGHTING OR SECONDARY) IN THE PROJECT AREA. THE CONTRACTOR IS HEREBY REQUIRED TO CONTACT OUPS AT 1(800) 362-2764 FORTY EIGHT HOURS PRIOR TO CONDUCTING ANY ACTIVITY WITHIN THE CONSTRUCTION AREA. THE DOP DISPATCH OFFICE NUMBER IS: (614) 645-7627 (VOICE)

ANY REQUIRED RELOCATION, SUPPORT, PROTECTION, OR ANY OTHER ACTIVITY CONCERNED WITH THE CITY'S (STREET LIGHTING SYSTEM FOR STREET LIGHTING) OR (ELECTRICAL FACILITIES FOR PRIMARY) IN THE CONSTRUCTION AREA IS TO BE PERFORMED BY THE CONTRACTOR UNDER THE DIRECTION OF DOP PERSONNEL AND AT THE EXPENSE OF THE PROJECT. DOP SHALL MAKE ALL FINAL CONNECTIONS TO DOP'S EXISTING ELECTRICAL SYSTEM AT THE EXPENSE OF THE PROJECT. THE CONTRACTOR SHALL USE MATERIAL AND MAKE REPAIRS TO A CITY OF COLUMBUS STREET LIGHTING SYSTEM BY FOLLOWING DOP'S "MATERIAL AND INSTALLATION SPECIFICATIONS" (MIS) AND THE CITY OF COLUMBUS "CONSTRUCTION AND MATERIAL SPECIFICATIONS - CITY OF COLUMBUS (CMSC). ANY NEW OR RE-INSTALLED UNDERGROUND STREET LIGHT SYSTEM SHALL REQUIRE TESTING AS REFERRED TO IN SECTION 1000.18 OF THE CMS MANUAL. THE CONTRACTOR SHALL CONFORM TO DOP'S EXISTING CONDUCTOR SAFETY POLICY AND HOLD CARD SYSTEM, MIS-95 COPIES OF WHICH ARE AVAILABLE FROM DOP IF YOU HAVE ANY QUESTIONS, CALL SCOTT WOLFE AT (614) 724-4351 OR CHRIS VOGEL AT (614) 645-6963.

IF ANY ELECTRIC FACILITY BELONGING TO DOP IS DAMAGED IN ANY MANNER BY THE CONTRACTOR, ITS AGENTS, SERVANTS, OR EMPLOYEES, AND REQUIRES EMERGENCY REPAIRS, DOP SHALL MAKE ALL NECESSARY REPAIRS, AND THE EXPENSE OF SUCH REPAIRS AND OTHER RELATED COSTS SHALL BE PAID BY THE CONTRACTOR TO THE DIVISION OF POWER, CITY OF COLUMBUS, OHIO.

WATER

LEGEND

EXISTING CONDITIONS

-----	CENTERLINE ROAD / DRIVE	-----	STONE WALL
-----	EDGE OF PAVEMENT	-----	ROCK
-----	CURB	-----	TREES
-----	BERM	-----	BUSHES
-----	ASPHALT OR CONCRETE DRIVE / WALK	-----	STUMP
-----	FENCE	-----	CONCRETE PAD
-----	GUARDRAIL	-----	WOOD POST
-----	EX R/W RIGHT-OF-WAY	-----	POST / BOLLARD
-----	P/L PROPERTY LINE	-----	FLAG POLE
-----	LOT LINE	-----	PARKING BLOCK
-----	ST STORM	-----	BIRDBATH
-----	SAN SANITARY	-----	HANDRAIL
-----	W WATER	-----	STEPS
-----	DITCH	-----	CATCH BASIN
-----	GAS UNDERGROUND GAS	-----	CURB INLET MANHOLE
-----	UGT UNDERGROUND TELEPHONE	-----	STORM MANHOLE
-----	UGE UNDERGROUND ELECTRIC	-----	CURB INLET
-----	OHE OVERHEAD ELECTRIC	-----	BUILDING
-----	EX U UTILITY EASEMENT (SPECIFY TYPE)	-----	CANOPY
-----	TREE LINE	-----	TREE (TBR)
-----	OHT OVERHEAD TELEPHONE		
-----	OHPF OVERHEAD FIBER OPTIC		
-----	SECTION LINE		
-----	RAILROAD		
-----	SIGNS		
-----	CITY OF COLUMBUS		
-----	CITY OF DUBLIN		
-----	MUNICIPAL BOUNDARY		
-----	COMBINATION CURB & GUTTER		
-----	CONCRETE WALL		

EXISTING UTILITY SYMBOLS

⊖	GUY ANCHOR	Ⓜ	MAILBOX	Ⓢ	SIGNAL POLE	Ⓢ	SANITARY MANHOLE	Ⓣ	TELEPHONE PULL BOX
⊕	FIRE HYDRANT	⊗	WATER VALVE	Ⓟ	PULL BOX	Ⓣ	TRAFFIC SIGNAL CONTROL BOX		
⊕	GAS VALVE	⊙	CLEAN OUT	Ⓜ	WATER METER	Ⓢ	TELEPHONE MANHOLE	Ⓣ	LIGHT POLE
Ⓣ	TELEPHONE ELECTRIC POLE	Ⓣ	ELECTRIC POLE	Ⓣ	ELECTRIC LIGHT POLE	Ⓣ	TELEPHONE POLE		

SURVEY SYMBOLS

⊙	IRON PIN/RAILROAD SPIKE FND.	Ⓜ	RIGHT-OF-WAY MON. FND.	⊕	MAG/PK NAIL SET
⊙	MAG/PK NAIL FND.	⊕	BENCHMARK	Ⓢ	SOIL BORING
▲	RAILROAD SPIKE SET	●	IRON PIN SET		

ABBREVIATIONS

1"WS.....1" WATER SERVICE	(TBA).....TO BE ABANDONED (SEE NOTE BELOW)
6"SS.....6" SANITARY SERVICE	(TBR).....TO BE REMOVED
1"GS.....1" GAS SERVICE	(TBRL).....TO BE RELOCATED
4"RD.....4" ROOF DRAIN	(RTG).....RECONSTRUCT TO GRADE
OHE.....OVERHEAD ELECTRIC	(ATG).....ADJUST TO GRADE
OHT.....OVERHEAD TELEPHONE	(ENC).....ENCROACHMENT TO REMAIN UNLESS OTHERWISE DIRECTED BY THE ENGINEER-IN-CHARGE
UGT.....UNDERGROUND TELEPHONE	(ENC-TBR).....ENCROACHMENT TO BE REMOVED BY THIS PROJECT
CATV.....CABLE TELEVISION	
(PA).....PREVIOUSLY ABANDONED	
(DND).....DO NOT DISTURB	

PROPOSED LAYOUT

-----	CONSTRUCTION CENTERLINE	=====	COMBINATION CURB & GUTTER
-----	CENTERLINE PROPOSED DRIVE	=====	STORM (24" AND LARGER)
-----	CONSTRUCTION LIMITS	-----	DETECTABLE WARNING
-----	EDGE OF PAVEMENT	-----	PROPOSED FIRE HYDRANT
-----	CURB	-----	WATER VALVE
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-----	DITCH		
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-----	TMP TEMPORARY CONSTRUCTION EASEMENT		
-----	SW SEWER EASEMENT		
-----	CH CHANNEL EASEMENT		

CALCULATED
CHECKED
ABC

GENERAL NOTES

PROJECT NAME

XXXX-E



REVISED 10/24/14
 J:\Design and Construction\Design\Plan Review\SAMPLE SHEETS (E-Plan)\CAD Drawings\05_01 GENERAL NOTES.dwg (Notes (CIP & PRIV)-2)

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-----	ASPHALT OR CONCRETE DRIVE		
-----	TMP TEMPORARY CONSTRUCTION EASEMENT		
-----	SW SEWER EASEMENT		
-----	CH CHANNEL EASEMENT		

CALCULATED
CHECKED ABC

GENERAL NOTES

PROJECT NAME

XXXX-E
XX

REVISED 10/24/14
J:\Design and Construction\Design\Plan Review\SAMPLE SHEETS (E-Plan)\CAD Drawings\05_01 GENERAL NOTES.dwg (Notes (CIP & PRIV)-2)

TEMPORARY TRAFFIC CONTROL REQUIRED FOR PRIVATE DEVELOPMENT PROJECTS

A. TEMPORARY TRAFFIC CONTROL ITEMS

- 1. ALL TEMPORARY TRAFFIC CONTROL (TTC) DEVICES SHALL BE FURNISHED, ERECTED, MAINTAINED AND REMOVED BY THE CONTRACTOR IN ACCORDANCE WITH THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS (OMUTCD), (CURRENT EDITION). COPIES ARE AVAILABLE FROM THE OHIO DEPARTMENT OF TRANSPORTATION, OFFICE OF CONTRACTS, 1980 WEST BROAD STREET, COLUMBUS, OHIO, 43216. NOTE: ALL DEVICES SHALL COMPLY, FOR CONDITION AND LOCATION, WITH THE CURRENT EDITION OF THE NCHRP 350 CRASH TESTING GUIDELINES.
2. CONSTRUCTION OPERATIONS SHALL NOT BEGIN UNTIL ALL TRAFFIC CONTROL IS IN PLACE AND APPROVED BY THE DEPARTMENT OF PUBLIC SERVICE INSPECTOR. IF THE CONTRACTOR DOES NOT COMPLY WITH THE STANDARDS, INCLUDING THE INSTALLATION OF TEMPORARY PAVEMENT MARKINGS AND THE REMOVAL OF CONFLICTING TRAFFIC CONTROLS, THEIR PERMIT SHALL BE REVOKED AND ALL WORK SHALL BE TERMINATED. TEMPORARY PAVEMENT MARKINGS TO INCLUDE, BUT NOT LIMITED TO, CHANNELIZING LINES, EDGE LINES, AND CENTERLINES SHALL BE INSTALLED AND MAINTAINED ON ALL CONSTRUCTION OPERATIONS LASTING A MINIMUM OF 14 CALENDAR DAYS OR AS DIRECTED BY THE TEMPORARY TRAFFIC CONTROL COORDINATOR OR THE PROJECT ENGINEER.
3. THE CONTRACTOR SHALL GIVE ADVANCE NOTIFICATION (WRITTEN AND VERBALLY) TO THE TEMPORARY TRAFFIC CONTROL COORDINATOR AT 645-6269 OR 645 5845, THE COLUMBUS PAVING THE WAY PROGRAM COORDINATOR AT 645-7283 OR 645 6016, OR pavingtheway@columbus.gov, AND THE PROJECT ENGINEER, INFORMING THEM OF ALL UPCOMING MAINTENANCE OF TRAFFIC CHANGES ON A WEEKLY BASIS. NOTIFICATION SHALL INCLUDE, BUT NOT LIMITED TO, WHAT, WHERE, WHEN, AND HOW PEDESTRIAN AND VEHICULAR TRAFFIC WILL BE AFFECTED, AND THE TEMPORARY TRAFFIC CONTROL PROCEDURES THE CONTRACTOR IS PLANNING TO USE. THE TYPE OF TRAFFIC CHANGES SHALL DETERMINE THE LENGTH OF ADVANCE NOTIFICATION REQUIRED:

Table with 2 columns: TYPE OF CHANGE, ADVANCE NOTIFICATION NEEDED. Rows include: DETOURS / ROAD CLOSURES (30-DAY NOTIFICATION PRIOR TO CLOSURE), LANE CLOSURE LASTING TWO WEEKS OR MORE (2-WEEKS), LANE CLOSURES LESS THAN TWO WEEKS (3-DAYS), LANE CLOSURE OF TWO DAYS OR LESS (1-DAY)

THE COLUMBUS PAVING THE WAY PROGRAM COORDINATOR SHALL BE SUPPLIED COPIES OF ALL NOTIFICATION LETTERS SENT TO AREA BUSINESSES AND RESIDENTS.

THE COTA SENIOR SERVICE PLANNER SHALL BE CONTACTED 30 DAYS PRIOR TO ANY PLANNED CLOSURE ON ASSIGNED COTA ROUTES. ANY OTHER UNFORESEEN IMPACTS TO TRAFFIC SHALL BE IMMEDIATELY REPORTED AS THEY OCCUR.

- 4. ACCESS FOR PEDESTRIAN AND VEHICULAR TRAFFIC TO ALL ADJOINING PROPERTIES SHALL BE MAINTAINED AT ALL TIMES.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION AND SAFE MOVEMENT OF PEDESTRIANS THROUGH, AROUND, OR DETOURED AWAY FROM THE CONSTRUCTION SITE. TRAFFIC CONTROL FOR PEDESTRIAN MOVEMENT SHALL BE AS PER FIGURES 6H-28 (TA-28) AND 6H-29 (TA-29) OF PART VI OF THE OMUTCD. ALL SIDEWALK DIVERSIONS AND TEMPORARY MID-BLOCK CROSSINGS SHALL BE PRE-APPROVED BY THE PROJECT ENGINEER OR THE TEMPORARY TRAFFIC CONTROL COORDINATOR.
6. THE CONTRACTOR SHALL MAINTAIN ALL PERMANENT TRAFFIC CONTROLS NOT IN CONFLICT WITH THE TEMPORARY TRAFFIC CONTROLS THROUGHOUT THIS PROJECT. PERMANENT TRAFFIC CONTROLS MAY BE TEMPORARILY RELOCATED OR COVERED, AS APPROVED BY THE ENGINEER. THE CONTRACTOR SHALL ASSUME ALL LIABILITY FOR MISSING, DAMAGED, OR IMPROPERLY PLACED SIGNS.
7. ANY WORK DONE BY THE DEPARTMENT OF PUBLIC SERVICE, INCLUDING INSTALLATION, RELOCATION, REMOVAL AND/OR REPLACEMENT OF TEMPORARY TRAFFIC CONTROL DEVICES AS RESULT OF WORK DONE BY THE CONTRACTOR OR AS A RESULT OF NEGLIGENCE OF THE CONTRACTOR, SHALL BE AT THE CONTRACTORS' EXPENSE.
8. THE ROADWAY SHALL NOT BE OPENED TO NON-CONSTRUCTION TRAFFIC UNTIL THE CRITICAL PERMANENT TRAFFIC CONTROL ARE IN PLACE, OR UNTIL TEMPORARY TRAFFIC CONTROLS APPROVED BY THE ENGINEER, ARE INSTALLED. THE CRITICAL PERMANENT TRAFFIC CONTROL ARE STOP, YIELD, ONE-WAY, DO NOT ENTER, AND RESTRICTED TURN SIGNS. OTHER CRITICAL SIGNS MAY BE NOTED ON THE PLANS AS WELL. THE CONTRACTOR ASSUMES ALL LIABILITY FOR THE PREMATURE REMOVAL OF TEMPORARY TRAFFIC CONTROLS.
9. ITEM 614 - MAINTAINING TRAFFIC, LUMP SUM

ALL COSTS THAT CONSIST OF MAINTAINING AND PROTECTING VEHICULAR AND PEDESTRIAN TRAFFIC ACCORDING TO THE LATEST EDITION OF THE CITY OF COLUMBUS CONSTRUCTION AND MATERIAL SPECIFICATIONS, THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS (OMUTCD), AND PER THE REQUIREMENTS DESIGNATED IN THE PLAN INCLUDING ALL LAW ENFORCEMENT OFFICER (LEO) AND FLAGGER HOURS SHALL BE INCLUDED IN THE LUMP SUM ITEM 614.

IN ADDITION TO THE REQUIREMENTS HEREIN, AND THE LATEST EDITION OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, A UNIFORMED LAW ENFORCEMENT OFFICER (LEO) SHALL BE PROVIDED FOR CONTROLLING TRAFFIC UNDER THE FOLLOWING CONDITIONS:

- WORK WITHIN A SIGNALIZED INTERSECTION, DEFINED AS THE AREA BOUNDED BY THE REAR X-WALK LINES
• WHEN FLAGGING WITHIN THE INTERSECTION OF TWO ARTERIAL ROADWAYS
• WHEN SPECIFIED IN THE MAINTENANCE OF TRAFFIC PLAN OR AS DIRECTED BY THE PROJECT ENGINEER
• WHEN SHIFTING TRAFFIC LEFT OF CENTER, THROUGH A SIGNALIZED INTERSECTION, WITHOUT SHIFTING SIGNAL HEADS

A FLAGGER SHALL BE UTILIZED TO ASSIST IN CONTROLLING TRAFFIC WHILE EQUIPMENT IS ENTERING OR EXITING AN INTERSECTION OR WORK ZONE. THE CONTRACTOR MAY UTILIZE HIS OWN OR LEO UNDER PAY ITEM 614 MAINTAINING TRAFFIC, LUMP SUM.

FLAGGERS AND LEO'S SHALL BE EQUIPPED ACCORDING TO THE STANDARDS FOR FLAGGING TRAFFIC CONTAINED IN THE OMUTCD. FLAGGING OPERATIONS PERFORMED BY LEO'S OR DESIGNATED FLAGGERS SHALL ONLY BE PERMITTED AS LONG AS ALL TRAFFIC CONTROL IS IN PLACE ACCORDING TO FIGURE 6H-10 (TA-10) IN THE OHIO MANUAL. PATROL CARS SHALL NOT BE USED IN FLAGGING OPERATIONS.

IF THE CONTRACTOR WISHES TO UTILIZE LEO'S FOR TRAFFIC CONTROL OTHER THAN FOR THE REQUIRED IN THE PLANS, THEY DO SO AT THEIR OWN EXPENSE. THE CONTRACTOR SHALL MAKE ARRANGEMENT THROUGH THE COLUMBUS POLICE DIVISION AT (614) 645-4795.

LEO'S SHALL BE CONSIDERED TO BE EMPLOYED BY THE CONTRACTOR AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR THEIR ACTIONS. ALTHOUGH EMPLOYED BY THE CONTRACTOR, THE CITY REPRESENTATIVE SHALL HAVE CONTROL OVER THEIR PLACEMENT. LEO'S SHALL NOT HAVE THE AUTHORITY TO CHANGE, EDIT, OR MODIFY ANT MAINTENANCE OF TRAFFIC SCHEME WITHOUT THE PERMISSION OF THE TEMPORARY TRAFFIC CONTROL COORDINATOR OR PROJECT ENGINEER UNLESS AN EMERGENCY DEVELOPS.

IF A SAFETY HAZARD DEVELOPS, A LEO MAY BE ASSIGNED BY THE COLUMBUS SAFETY AND SERVICES DIRECTOR AT THE CONTRACTOR'S EXPENSE.

TEMPORARY TRAFFIC CONTROL NOTES IF APPLICABLE FOR PRIVATE DEVELOPMENT PROJECTS

B. TEMPORARY TRAFFIC CONTROL ITEMS

- 1. PORTABLE CHANGEABLE MESSAGE SIGN (PCMS) SHALL BE INSTALLED A MINIMUM OF 7 DAYS PRIOR TO CLOSURE OF ROADWAY. THE MESSAGE SHALL ADVISE THE MOTORISTS OF THE DATES, TIMES, AND DURATION OF THE CLOSURE. THE PCMS SHALL REMAIN IN PLACE FOR 7 DAYS AFTER THE START OF THE CLOSURE, OR AS DIRECTED BY THE TEMPORARY TRAFFIC CONTROL COORDINATOR OR PROJECT ENGINEER.

- 2. TYPE C STEADY-BURN OR TYPE D 360-DEGREE STEADY BURN WARNING LIGHTS SHALL BE REQUIRED ON ALL BARRICADES, DRUMS, AND SIMILAR TRAFFIC CONTROL DEVICES IN USE AT NIGHT. ONLY 42" REFLECTORIZED CHANNELIZING DEVICES (CONES) SHALL BE PERMITTED FOR NIGHTTIME WORK WITH THE APPROVAL OF THE TTC COORDINATOR AT 645-6269 OR 645-5845 PER ODOT STANDARDS.
3. A FLASHING ARROW PANEL (48" x 96"-TYPE C) SHALL BE USED IN LANE CLOSURES AS PER THE OHIO MANUAL (OMUTCD).
4. ALL TRENCHES WITHIN THE ROAD RIGHT OF WAY SHALL BE BACKFILLED OR SECURELY PLATED PER (CITY OF COLUMBUS GENERAL POLICY ON STEEL PLATE USAGE DATES 11/15/2006 AND 2013 STD. DWG. 1441) DURING NON-WORKING HOURS.
5. ALL EXISTING TRAFFIC LANES SHALL BE OPEN TO TRAFFIC AT ALL TIMES ON:
6. ALL TRAFFIC LANES SHALL BE FULLY OPEN TO TRAFFIC FROM 6:00 A.M. TO 9:00 A.M. AND 4:00 P.M. TO 6:00 P.M., OR 6:00 A.M. TO 9:00 A.M. AND 3:00 P.M. TO 6:00 P.M. IN THE COLUMBUS BUSINESS DISTRICT AREA, MONDAY THROUGH FRIDAY ON LANE (S) MAY BE CLOSED TO TRAFFIC DURING WORKING HOURS.
7. ONE-WAY LANE (S) OF TRAFFIC SHALL BE MAINTAINED AT ALL TIMES ON
8. TWO-WAY TWO-LANE (ONE-LANE EACH DIRECTION) SHALL BE MAINTAINED AT ALL TIMES BY USE OF EXISTING, PROPOSED, OR TEMPORARY PAVEMENT PER FIGURE 6H-32 TYPICAL APPLICATION 32 (TA-32) OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
9. TWO-WAY ONE-LANE TRAFFIC MAY BE MAINTAIN DURING CONSTRUCTION OPERATIONS ON PER FIGURE 6H-10 (TA-10) OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
10. MAY BE CLOSED BETWEEN AND FOR A MAXIMUM OF HOUR (S)/ DAY (S) BETWEEN THE HOURS OF AND PER FIGURE 6H-20 (TA-20) OF THE OMUTCD AND/OR APPROVED BY THE DEPARTMENT OF PUBLIC SERVICE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS IN PROVIDING A DETOUR INCLUDING THE REMOVAL AND REINSTALLATION OF ANY CONFLICTING TRAFFIC CONTROL AND/OR ANY NECESSARY TRAFFIC SIGNAL WORK.
11. A TEMPORARY DIVERSION SHALL BE PROVIDED AND MAINTAINED IN GOOD CONDITION ON DURING THE PERIOD OF WORK. ALL SUCH DIVERSIONS SHALL BE IN ACCORDANCE WITH THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (OMUTCD).
12. THE DEPARTMENT OF PUBLIC SERVICE WILL REMOVE OR COVER ALL PARKING METER HEADS PUT OUT OF SERVICE BY THIS CONTRACT. THERE IS A \$60.00 CHARGE FOR THE REMOVAL AND RE-INSTALLATION OF EACH METER. IN ADDITION, A DAILY METER FEE WILL BE CHARGED FOR ALL ENFORCEMENT HOURS FOR EACH METER TAKEN OUT OF SERVICE. THESE CHARGES WILL BE COLLECTED FROM THE CONTRACTOR IN ADVANCE WITH THE ISSUANCE OF THE STREET OCCUPANCY / EXCAVATION PERMIT FROM THE DEPARTMENT OF PUBLIC SERVICE'S PERMIT OFFICE. (645-7497) THE MANAGER OF PARKING SERVICES SUPPORT (645-7890) SHALL BE NOTIFIED A MINIMUM OF FORTY-EIGHT (48) HOURS (EXCLUDING SAT. SUN., & HOLIDAYS) PRIOR TO THE BEGINNING OF WORK. CALL 645-8376 IF UNABLE TO MAKE CONTACT THROUGH THE PRIOR PHONE NUMBER.
13. TEMPORARY "EMERGENCY NO PARKING" SIGNS SHALL BE INSTALLED AT 50' INTERVALS C/C MINIMUM BY USE OF ANY OF THE FOLLOWING ITEMS: EXISTING SIGN POSTS, EXISTING UTILITY POLES, DRUMS AND/OR 42" CONES AND REMOVED BY THE CONTRACTOR IN AREAS WITH NO PARKING METERS. THE SIGNS SHALL HAVE THE INSTALLATION DATE, WORKING DATES, AND HOURS OF RESTRICTION SHOWN ON EACH SIGN. THESE SIGNS CAN BE OBTAINED FROM THE DEPARTMENT OF PUBLIC SERVICE'S PERMIT OFFICE. THE POLICE DIVISION REQUIRES THE "EMERGENCY NO PARKING" SIGNS TO BE POSTED A MINIMUM OF SEVENTY-TWO (72) HOURS PRIOR TO ANY VEHICLES BEING TOWED. WITHIN TWENTY-FOUR (24) HOURS OF POSTING, THE CONTRACTOR SHALL SUPPLY THE DEPARTMENT OF PUBLIC SERVICE WITH A WRITTEN RECORD OF POSTED LOCATIONS (FAX 645-3298).
14. TRAFFIC OPERATIONS' PERSONNEL SHALL LOCATE AND MARK ALL UNDERGROUND TRAFFIC CONTROL CABLES. THE TRAFFIC OPERATIONS SHOP SHALL BE NOTIFIED 645-7393 (FAX 645-5967) AT LEAST FORTY-EIGHT (48) HOURS (EXCLUDING SATURDAY & SUNDAY) PRIOR TO THE BEGINNING OF ANY WORK WITH 450 FEET OF ANY SIGNALIZED INTERSECTION (S) OR WITHIN ANY POSTED AREA WHERE THE DEPARTMENT HAS UNDERGROUND CABLE. THE SIGNAL OPERATION ENGINEER (645-6418) SHALL BE NOTIFIED SIX (6) WEEKS IN ADVANCE FOR SIGNAL REVISION OR POLE RELOCATIONS.
15. NO EXCAVATION SHALL BE MADE WITHIN FIVE (5) FEET OF ANY FOUNDATION THAT SUPPORTS SIGNAL POLES, TRAFFIC SIGNAL DISPLAYS OR SIGNS BY MAST ARMS OR SIGNAL SPAN. EXCAVATION WITHIN EIGHT (8) FEET, BUT MORE THAN FIVE (5) FEET SHALL REQUIRE ADDITIONAL SUPPORT (DOWN GUY, HEAD GUY, BASE GUY, ETC.). THE CONTRACTOR SHALL CONTACT SIGNAL OPERATION PERSONNEL AT 645-0423 (CELL 419-4501) AT LEAST FORTY-EIGHT (48) HOURS (EXCLUDING SATURDAY & SUNDAY) PRIOR TO BEGINNING OF SUCH EXCAVATION SO THAT THE CITY CAN APPROVE THE STABILIZATION SETUP BY THE CONTRACTOR. IF UNABLE TO MAKE CONTACT THROUGH ABOVE NUMBERS, CALL 645-7393. STABILIZATION WILL BE DONE BY THE CONTRACTOR AT THE OWNERS' / CONTRACTING AGENCY'S EXPENSE.
16. WHEN ANY TRAFFIC CONTROL DEVICE, CONDUIT, OR CABLE IS DAMAGED, THE CONTRACTOR SHALL NOTIFY SIGNAL OPERATION PERSONNEL AT 645-0423 (CELL 451-4501) BETWEEN 7:00 A.M. AND 4:00 P.M., MONDAY THROUGH FRIDAY. IF UNABLE TO MAKE CONTACT THROUGH THE OTHER NUMBERS, CALL 645-7393.
17. SIGNAL CONDUIT CLEARANCE FROM ADJACENT UTILITIES SHALL BE MAINTAINED AT ALL TIMES, THE SIGNAL CONDUIT CLEARANCE TABLE CAN BE FOUND IN THE CITY OF COLUMBUS TRAFFIC SIGNAL DESIGN MANUAL TABLE 13.2, MINIMUM CONDUIT CLEARANCE.
18. THE ROADWAY OR ANY SECTION OF ROADWAY SHALL NOT BE OPENED TO NON-CONSTRUCTION TRAFFIC UNTIL ALL TEMPORARY, NON-REFLECTIVE, BLACKOUT TAPE HAS BEEN COMPLETELY REMOVED FROM NON-CONFLICTING PERMANENT PAVEMENT MARKINGS FOR THAT AREA OF THE ROADWAY, OR UNLESS OTHERWISE DIRECTED IN WRITING BY THE ENGINEER. THIS IS SUPPLEMENTAL TO THE CMS-614.11F, AND SHALL BE PAID FOR THROUGH THE 614-LUMP SUM.
19. WHENEVER YELLOW CENTERLINES OR TURN-LANE LINE ARE PAVED OVER, REMOVED, OR OTHERWISE UNSERVICEABLE, THE CONTRACTOR SHALL INSTALL CLASS II TEMPORARY STRIPING (MINIMUM 4' LONG SEGMENTS). TEMPORARY PAINT SHALL BE USED ON ALL MILLED SURFACES. TEMPORARY TAPE SHALL BE USED ON ALL FINAL COURSES OF ASPHALT. PAINT OR TAPE MAY BE USED ON ALL INTERMEDIATE COURSES OF ASPHALT. IF APPROVED BY THE ENGINEER, DRUMS WITH STEADY BURNING TYPE C OR TYPE D 360 DEGREE WARNING LIGHTS AND "KEEP RIGHT" SIGNS MAY BE SUBSTITUTED FOR CENTERLINE MARKINGS.
20. CLASS II TEMPORARY STRIPING (MINIMUM 4' LONG SEGMENTS) SHALL BE AS PER ITEM 614-WORK ZONE PAVEMENT MARKINGS AND SHALL BE PLACED WITH ONE (1) FOOT LONGITUDINAL TOLERANCE OF THE PERMANENT STRIPE (S). ALL STRIPING NOT TO WITHIN ONE (1) FOOT TOLERANCE SHALL BE REMOVED AND REPLACED IN THE PROPER LOCATION BY THE CONTRACTOR. CLASS II TEMPORARY STRIPING SHALL BE OF THE APPROPRIATE COLOR AND SPACED AT A MAXIMUM OF FORTY (40) FEET CENTER TO CENTER.

EXISTING PERMANENT TRAFFIC CONTROL NOTES REQUIRED FOR PRIVATE DEVELOPMENT PROJECTS

C. EXISTING PERMANENT TRAFFIC CONTROL ITEMS

- 1. ANY WORK DONE BY THE DEPARTMENT OF PUBLIC SERVICE, INCLUDING INSTALLATION, RELOCATION, REMOVAL AND/OR REPLACEMENT OF PERMANENT TRAFFIC CONTROL DEVICES AS A RESULT OF WORK DONE BY THE CONTRACTOR OR AS A RESULT OF NEGLIGENCE OF THE CONTRACTOR, SHALL BE AT THE CONTRACTOR'S EXPENSE.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REINSTALLATION AND/OR REPLACEMENT OF ALL PERMANENT TRAFFIC CONTROL DEVICES DAMAGED OR REMOVED DURING CONSTRUCTION. PERMANENT TRAFFIC CONTROL NO LONGER IN CONFLICT WITH TEMPORARY TRAFFIC CONTROL SHALL BE REPLACED IMMEDIATELY.

EXISTING PERMANENT TRAFFIC CONTROL NOTES IF APPLICABLE FOR PRIVATE IMPROVEMENT PROJECTS

D. EXISTING PERMANENT TRAFFIC CONTROL ITEMS

- 1. ALL OVERHEAD CABLE, DOWN GUYS OR BACK GUYS SHALL NOT BLOCK ANY PORTION OF A TRAFFIC SIGNAL, TRAFFIC CONTROL SIGN, OR OTHER TRAFFIC CONTROL DEVICE SUCH THAT VISIBILITY OR OPERATION OF THE TRAFFIC CONTROL DEVICE IS IMPAIRED.
2. ALL PERMANENT PAVEMENT MARKINGS AND TRAFFIC CONTROL SIGNS AS SHOWN ON THIS PLAN SHALL BE INSTALLED BY THE CONTRACTOR AT THE PROJECT'S EXPENSE. THE PROJECT ENGINEER SHALL BE NOTIFIED TO DIRECT APPROPRIATE PERSONNEL A MINIMUM OF FORTY-EIGHT (48) HOURS (EXCLUDING SAT. & SUN.) PRIOR TO THE INSTALLATION OF PERMANENT MARKING TO INSPECT AND APPROVE THE PAVEMENT MARKING LAYOUT PRIOR TO PLACING THE PERMANENT MARKINGS.
3. PERMANENT STRIPING OR CLASS I TEMPORARY STRIPING SHALL BE INSTALLED NO LATER THAN FOURTEEN (14) CALENDAR DAYS AFTER THE FINAL PAVING COURSE IS COMPLETED. THE PAVING CONTRACTOR SHALL BE RESPONSIBLE TO NOTIFY THE STRIPING CONTRACTOR TO INSURE THE PERMANENT STRIPING IS INSTALLED WITHIN THE FOURTEEN (14) CALENDAR DAY LIMIT.
4. IF THE DEPARTMENT OF PUBLIC SERVICE IS TO INSTALL PERMANENT STRIPING, THE PROJECT ENGINEER SHALL BE NOTIFIED TO DIRECT APPROPRIATE PERSONNEL A MINIMUM OF TEN (10) WORKING DAYS PRIOR TO THE APPLICATION OF THE FINAL COURSE OF PAVEMENT.

NOTE #5 INSTRUCTIONS: DO NOT PLACE IN PLAN
INSERT NOTE #5 WHEN; WORKING NEAR A LOCATION WHERE TRAFFIC LOOP DETECTION AND/OR ITS LEAD IN CABLES COULD BE INADVERTENTLY DAMAGED. CONTINGENCY ITEMS AND ESTIMATED QUANTITIES SHALL ONLY BE INCLUDED AS DIRECTED BY THE PLAN REVIEWER. LOOP DETECTION AND/OR ITS LEAD IN CABLES BEING DESTROYED OR ELSE RENDERED INOPERATIVE DUE TO TYPICAL CONSTRUCTION ACTIVITIES SHALL BE QUANTIFIED IN THE GENERAL SUMMARY AND SIGNAL SUMMARY AND SHOWN AS REMOVED AND REPLACED. NOTE # 5 IS NOT REQUIRED FOR THIS OPERATION UNLESS THE AFOREMENTIONED REQUIREMENT IS MET.

5. AT ANY LOCATION WHERE THE CONTRACTOR DAMAGES DETECTORS AND/OR THEIR LEAD IN CABLES THE CONTRACTOR SHALL REPLACE THEM. AT ANY LOCATION WHERE DETECTION IS CHANGED FROM MAG PROBE UNITS TO LOOP, THE CONTRACTOR SHALL REPLACE THE PROBE LEAD-IN WITH LOOP LEAD-IN CABLE. ALL REPAIRS TO DETECTION SHALL BE COMPLETED WITHIN 21 DAYS FROM DAMAGE TO DETECTION ON A PER INTERSECTION BASIS. IF THE 21 DAY REPAIR PERIOD CANNOT BE SATISFIED AT ANY LOCATION WHERE THE CONTRACTOR DAMAGES DETECTORS AND/OR THEIR LEAD-IN CABLES, THE CONTRACTOR, AT THE DIRECTION OF SIGNAL OPERATION PERSONNEL, MAY BE REQUIRED TO INSTALL A VERSICAM FLEX CAMERA SYSTEM OR TEMPORARY LOOP DETECTION. ANY CONTRACTOR FAILING TO COMPLY WITH THESE GUIDELINES SHALL BE SUBJECT TO PENALTY TO THE SUM OF \$100.00 PER DAY FOR EACH DAY BEYOND THE 21 DAY PERIOD ON A PER INTERSECTION BASIS, UNTIL CONDITIONS ARE MET TO THE SATISFACTION OF SIGNAL OPERATIONS PERSONNEL. THIS PENALTY DEDUCTION SHALL BE SPECIFIC TO EACH SIGNALIZED INTERSECTION EFFECTED BY THIS PROJECT AND SEPARATE FROM ANY LIQUIDATED DAMAGES FOR THE PROJECT AS A WHOLE. THE WORK TO INSTALL THE DETECTION SHALL CONFORM TO ODOT STANDARD DRAWING TC-82.10 (DATED 4/29/02 OR LATER) AND TO THE CURRENT STATE OF OHIO CONSTRUCTION AND MATERIAL SPECIFICATIONS WITH THE FOLLOWING PROVISIONS.

- A) THE CONTRACTOR SHALL PROVIDE THE DEPARTMENT OF PUBLIC SERVICE'S INSPECTOR, PRIOR TO THE COMMENCEMENT OF WORK, THE IMSA (INTERNATIONAL MUNICIPAL SIGNAL ASSOCIATION) CERTIFICATION PAPERS FOR ALL SIGNAL TECHNICIANS WORKING ON THIS PROJECT.
B) LOCATIONS OF THE REPLACEMENT DETECTION SHALL BE FIELD MARKED OR DIMENSIONED DRAWINGS SHALL BE SUBMITTED TO THE CONSTRUCTION SECTION BY DEPARTMENT OF PUBLIC SERVICE PERSONNEL. LOCATION OF FINAL PAVEMENT MARKINGS OR THE MARKINGS THEMSELVES SHALL BE CLEARLY INDICATED ON THE ASPHALT PRIOR TO DETECTOR LOCATIONS BEING MARKED. THE CONTRACTOR SHALL LAYOUT THE LOOPS ON THE PAVEMENT IF DRAWINGS ARE SUBMITTED. IF DRAWINGS HAVE NOT BEEN PROVIDED, CONTACT SIGNAL OPERATIONS PERSONNEL AT 645-0423 (CELL 419-4501) AT LEAST TWO WORKING DAYS PRIOR TO NEEDING THE LOCATION MARKED. IF UNABLE TO MAKE CONTACT THROUGH THE ABOVE NUMBERS, CALL 645-7393.
C) THE SAW SLOT DEPTH FOR LOOP WIRE INSTALLATION SHALL BE FOUR (4) INCHES WITH SIX (6) INCHES AT THE CONDUIT ENTRANCE. IF ADVERSE PAVEMENT CONDITIONS WARRANT, DEPTH MAY BE INCREASED TO SIX (6) INCHES THROUGHOUT AND SHALL BE DETERMINED BY THE DEPARTMENT OF PUBLIC SERVICE INSPECTOR.
D) EACH LOOP SHALL HAVE ITS OWN CONDUIT FROM EDGE OF PAVEMENT TO PULL BOX UNLESS SPECIFIED OTHERWISE BY THE DEPARTMENT OF PUBLIC SERVICE INSPECTOR.
E) THE PULLBOX ASSEMBLY SHALL BE RATED AS MEDIUM TO HEAVY DUTY, TO BE INSTALLED IN CONCRETE WALKWAYS, AND HAVE ALL STAINLESS STEEL HARDWARE. THE PULLBOX COVER SHALL HAVE THE WORD "TRAFFIC" ON IT. THE COVER SHALL BE BOLTED TO THE BOX AND SHALL BE EITHER POLYMER CONCRETE OR STEEL PLATE. THE COVER PLUS HOUSING AS A UNIT SHALL BE RATED TO WITHSTAND A MINIMUM OF 20,000LB. STATIC LOAD OVER A 10"x10" AREA AS PER ASTM-C857. THE BOX DEPTH SHALL BE 18 INCHES MINIMUM TO 30 INCHES MAXIMUM. IF THE PROJECT DOES NOT SPECIFY 713.08 CONCRETE PULL BOXES, THE SUPPLIED ASSEMBLIES SHALL BE AS FOLLOWS: CDR SYSTEMS MODEL SA32-1015-18, OR SYNERTECH MODEL 11"x 18". SIX (6) INCHES OF #4 AGGREGATE SHALL BE PLACED AT THE BOTTOM OF THE PULLBOX. NO CONDUIT SHALL PROTRUDE MORE THAN THREE (3) INCHES INSIDE THE PULLBOX. CONDUIT ELLS OR EXTENSIONS MAY BE USED TO ALIGN THE CONDUIT WITH THE HOUSING. THE COST FOR THE EXTENSIONS OR ELLS IF NEEDED SHALL BE INCIDENTAL TO THE PER UNIT PRICE.
F) WHEN A PULLBOX IS NOT USED, THE SOLDERED SPLICE SHALL BE MADE IN AN ANCHOR BASE STRAIN POLE OR CONDUIT RISER SPECIFIED BY THE DEPARTMENT OF PUBLIC SERVICE'S REPRESENTATIVE, EXCEPT WHERE A CONTROLLER CABINET IS MOUNTED ON THAT POLE IN WHICH CASE THE LOOP WIRE SHALL BE ROUTED DIRECTLY INTO THE CABINET.
G) THE CONTRACTOR SHALL NOT MAKE ANY WIRING CONNECTIONS OR ADJUSTMENTS INSIDE THE CONTROL CABINET. WHEN SUCH CONNECTIONS ARE REQUIRED, THE CONTRACTOR SHALL NOTIFY THE TRAFFIC OPERATIONS SHOP 645-7393, MON.-FRI., 8AM-4PM, TO SCHEDULE CITY FORCES FOR MAKING THE ACTUAL CONNECTIONS. THE CONTRACTOR SHALL BE AVAILABLE AT THE AGREED TIME. THE CONTRACTOR WILL BE BILLED FOR ANY TIME CITY FORCES ARE REQUIRED TO WAIT FOR THE CONTRACTORS' WORK TO BE COMPLETED.
H) CONDUIT PLACED IN "RIGHT OF WAY" AREAS BEARING NO TRAFFIC FOR DETECTOR LEAD IN SHALL BE ODOT ITEM 725.051, ODOT CONSTRUCTION AND MATERIAL SPECIFICATIONS, LATEST EDITION. CONDUIT PLACED UNDER A ROADWAY OR IN AREAS THAT MAY BEAR TRAFFIC SHALL BE ODOT ITEM 725.04 (SIZES AND TYPE TO BE DETERMINED BY THE DEPARTMENT OF PUBLIC SERVICE'S REPRESENTATIVE. ALL CONDUITS SHALL BE PLACED AT A MINIMUM DEPTH OF 24 INCHES.
I) LOOP WIRE SHALL BE IDENTIFIED WITH A PLASTIC TAG (WBLT, EBRT, ECT.) AT THE SPLICE POINT OR AT THE ENTRANCE TO THE CABINET IF LEAD-IN CABLE IS NOT USED.
J) THE ITEMS AND ESTIMATED QUANTITIES FOR THE REPLACEMENT OF THE DEPARTMENT OF PUBLIC SERVICE'S DETECTION ITEMS SHALL BE INCLUDED IN THESE PLANS WHEN DIRECTED BY THE PLAN REVIEWER. THESE ESTIMATES ARE FOR THE PURPOSE OF BIDDING THE PROJECT. THE FOLLOWING LIST OF THE ITEMS AND QUANTITIES PROJECTED FOR USE IN DETECTOR REPLACEMENT FOR THIS PROJECT:

Table with 4 columns: ITEM, QUANT, UNIT, ITEM DESCRIPTION. Rows include: 202 SF WALK REMOVED, 608 SF 4" CONCRETE WALK, 632 LF CONDUIT RISER, 1 OR 2 INCH DIA., 625 LF CONDUIT 1, 1 1/2, OR 2 INCH DIA., 625 LF TRENCH, 625 EACH PULL BOX, AS PER PLAN, 632 EACH DETECTOR LOOP, 632 LF LOOP DETECTOR LEAD-IN CABLE, 632 LF LASH / UNLASH CABLE

THE CONTRACTOR SHALL NOTIFY SIGNAL OPERATIONS' PERSONNEL AT 645-0423 (CELL 419-4501) AFTER ALL LOOPS HAVE BEEN INSTALLED AT EACH INTERSECTION. IF UNABLE TO MAKE CONTACT THROUGH THE ABOVE NUMBER CALL, 645-7393. THE DEPARTMENT OF PUBLIC SERVICE SHALL INSPECT ALL SENSORS AND TEST AS NECESSARY. THE CONTRACTOR SHALL REPLACE ALL LOOPS NOT MEETING SPECIFICATIONS.



HORIZ SCALE



CALCULATED CHECKED

MAINTENANCE OF TRAFFIC NOTES

PROJECT NAME



XXXX-E

EXISTING PERMANENT TRAFFIC CONTROL NOTES ITEM SPECIAL FOR CAPITAL IMPROVEMENT PROJECTS

E. ITEM SPECIAL- PARKING METER POSTS REMOVED OR POST CORES

THE CONTRACTOR SHALL COORDINATE WITH THE DEPARTMENT OF PUBLIC SERVICE REGARDING PARKING METERS TO BE REMOVED, METERS TO BE RELOCATED, AND NEW METER INSTALLATION.

THE DEPARTMENT OF PUBLIC SERVICE WILL REMOVE ANY METER HEADS SPECIFIED TO BE REMOVED, ROTATE METER HEADS SPECIFIED TO BE ROTATED; AND INSTALL METER HEADS AND POSTS FOR ANY NEW METERS SPECIFIED IN THE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE TO REMOVE THE POST AFTER THE METER HEAD IS REMOVED BY DPS. IF A NEW METER IS PLANNED IN A PAVED OR CONCRETE AREA, THE CONTRACTOR SHALL COORDINATE WITH THE DEPARTMENT OF PUBLIC SERVICE TO HAVE POST LOCATIONS PREMARKED AND SHALL CORE HOLE FOR POST INSTALLATION.

THE DEPARTMENT OF PUBLIC SERVICE WILL REMOVE OR COVER ALL PARKING METER HEADS PUT OUT OF SERVICE BY THIS PROJECT. THERE IS A \$60.00 DOLLAR CHARGE FOR THE REMOVAL AND REINSTALLATION OF EACH METER. IN ADDITION, A DAILY METER FEE WILL BE CHARGED FOR ALL ENFORCEMENT HOURS FOR EACH METER TAKEN OUT OF SERVICE. THESE CHARGES WILL BE COLLECTED FROM THE CONTRACTOR IN ADVANCE WITH THE ISSUANCE OF THE STREET OCCUPANCY/EXCAVATION PERMIT FROM THE DEPARTMENT OF PUBLIC SERVICE'S PERMIT OFFICE. (645-7497) THE MANAGER OF PARKING SERVICES SUPPORT (645-7890) SHALL BE NOTIFIED A MINIMUM OF FORTY-EIGHT (48) HOURS (EXCLUDING SAT, SUN, & HOLIDAYS) PRIOR TO BEGINNING WORK. CALL 645-8376 IF UNABLE TO MAKE CONTACT THROUGH THE PRIOR PHONE NUMBER.

PAYMENT FOR ALL LABOR, EQUIPMENT, AND MATERIALS NECESSARY FOR THIS WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE FOLLOWING:
ITEM SPECIAL - PARKING METER POST REMOVAL
ITEM SPECIAL - PARKING METER POST CORE



HORIZ. SCALE



CALCULATED
CHECKED

MAINTENANCE OF TRAFFIC NOTES

PROJECT NAME





HORIZ SCALE



CALCULATED

CHECKED

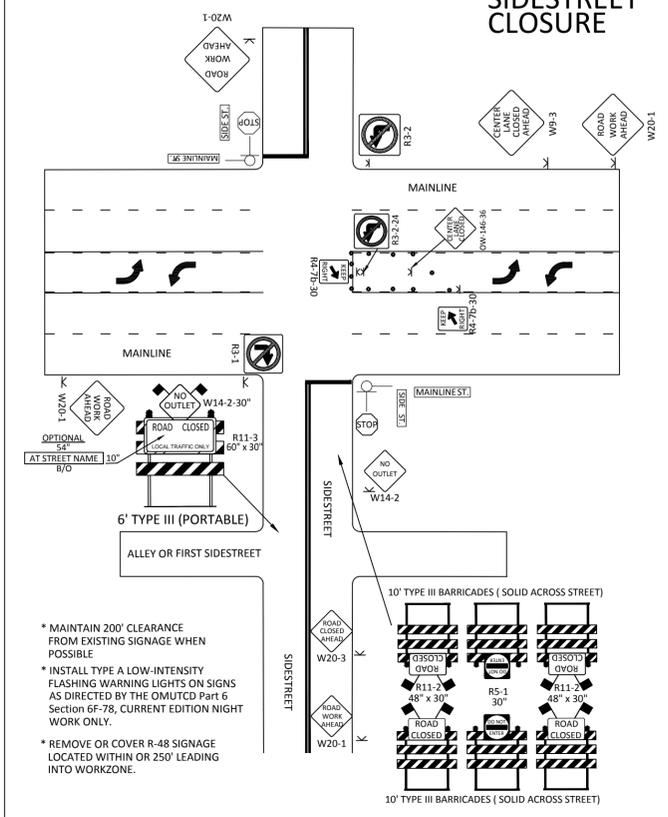
MAINTENANCE OF TRAFFIC

PROJECT NAME

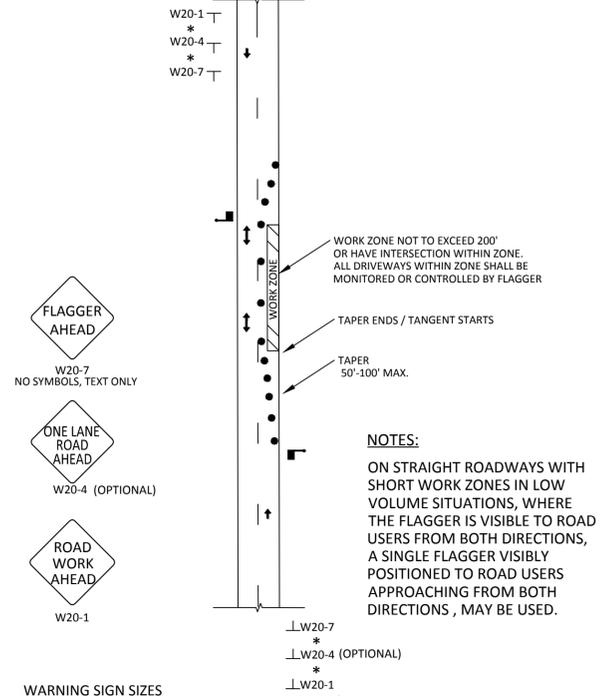


XXXX-E

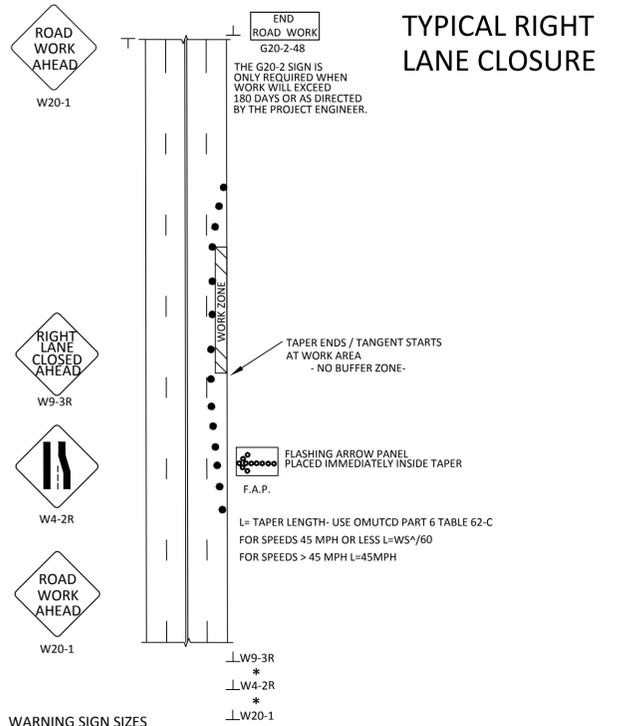
TYPICAL SIDESTREET CLOSURE



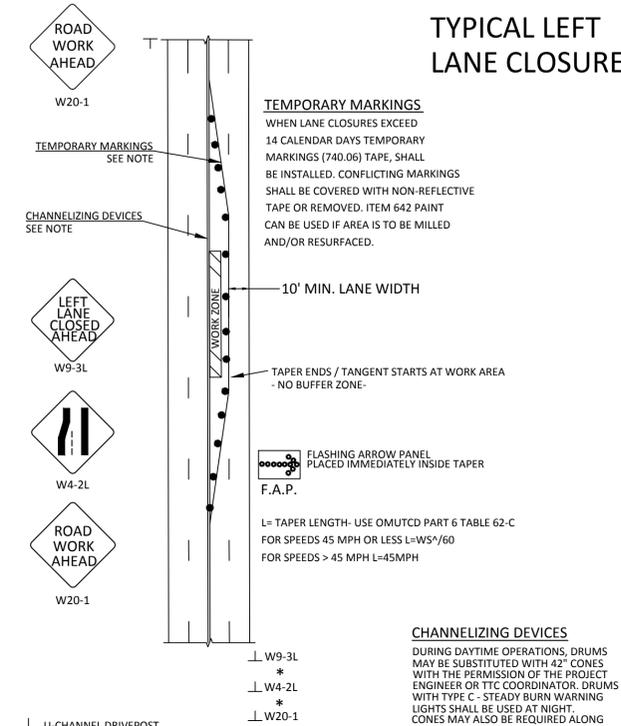
LANE CLOSURE ON TWO-LANE ROAD USING FLAGGERS



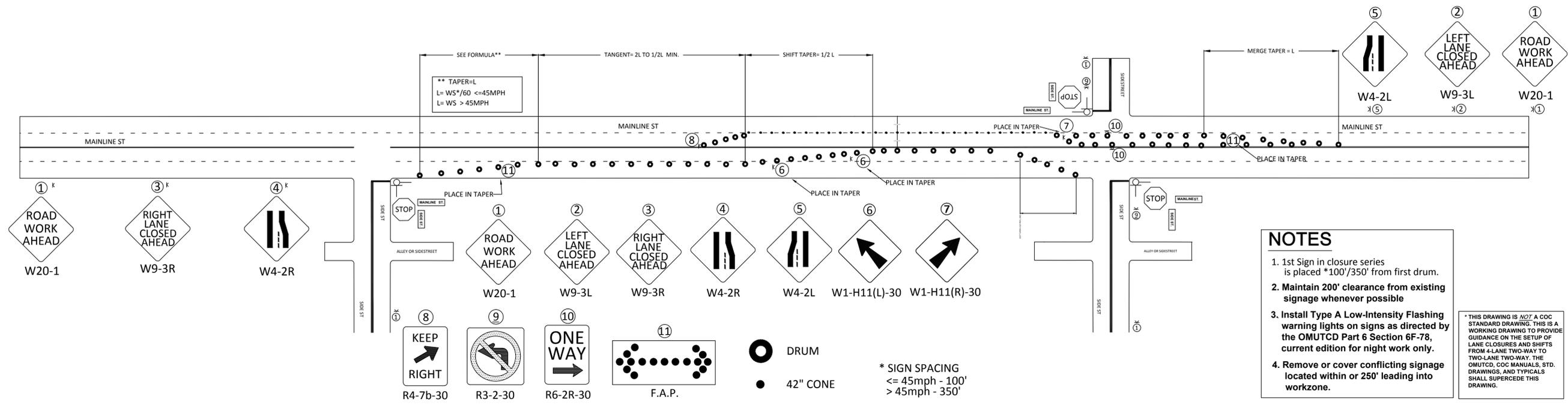
TYPICAL RIGHT LANE CLOSURE



TYPICAL LEFT LANE CLOSURE



EXISTING 4 LANE - 2 WAY to 2 LANE - 2 WAY Using LANE CLOSURE PLUS SHIFT ACROSS CENTERLINE



REVISED 07/7/14
J:\Design and Construction\Design\Plan_Review\SAMPLE SHEETS (E-Plan)\CAD Drawings\06_01 MAINT OF TRAFFIC.dwg (MOT-3)

ESTIMATE OF QUANTITIES

NOTE: These quantities have been provided only as an estimate to the scope of the work. The contractor shall be solely responsible to evaluate the complete project as detailed in the notes, plans, and specifications and procedures necessary for the completion of the plan improvements and to submit the total project cost accordingly.

ITEM	QUANTITY			UNIT	DESCRIPTION
	PART 1	PART 2	TOTAL		
STREET					
201	Lump	Lump	Lump	Sum	Clearing & Grubbing
202	390	-	390	S.Y.	Pavement To Be Removed & Disposed of
202	2	3	5	Each	Temporary Barricade To Be Removed
202	245	-	245	L.F.	Pipe Removed (Ex 12" Storm)
202	1	-	1	Each	Pull Box Removed
202	85	-	85	L.F.	Circuit Cable Removed
203	21,800	-	21,800	C.Y.	Excavation Including Embankment (Basin)
203	6,160	4,810	10,970	C.Y.	Excavation Including Embankment (Street)
204	5,090	4,000	9,090	S.Y.	Subgrade Compaction
204	45	-	45	S.Y.	Subgrade Compaction
301	15	-	15	C.Y.	Asphalt Concrete Base
304	7	-	7	C.Y.	6" Aggregate Base
407	6	-	6	Gal.	Tack Coat for Surface Course (0.15 Gal./S.Y.)
407	4	-	4	Gal.	Tack Coat for Intermediate Course (0.10 Gal./S.Y.)
448	43	-	43	C.Y.	Asphalt Concrete, Surface Course (Medium Traffic), PG 64-22
448	43	-	43	C.Y.	Asphalt Concrete, Intermediate Course (Medium Traffic), PG 64-22
452	3,535	3,635	7,170	S.Y.	7" Non-Reinforced Portland Cement Concrete Pavement
452	1,100	-	1,100	S.Y.	7.5" Non-Reinforced Portland Cement Concrete Pavement
454	60	120	180	L.F.	Pavement Relief Joints
605	2,765	2,160	4,925	L.F.	4" Underdrain
608	3,405	665	4,070	S.F.	Concrete Walk
608	16	12	28	Each	Curb Ramps w/ Detectable Warnings
609	2,765	2,160	4,925	L.F.	Combination Curb & Gutter
614	Lump	Lump	Lump	Sum	Maintenance of Traffic
614	3	2	5	Each	Temporary Barricades
659	3,775	3,015	6,790	S.Y.	Seeding & Mulching
STORM					
601	25	-	25	C.Y.	Rock Channel Protection, Type C
604	7	6	13	Each	Curb & Gutter Inlet (AA-S125)
604	4	-	4	Each	Double Curb & Gutter Inlet (AA-S125)
604	2	3	5	Each	Standard Catch Basin (AA-S133)
604	5	2	7	Each	ODOT CB-1.2, Catch Basin No. 2-3
604	1	-	1	Each	ODOT CB-1.2, Catch Basin No. 2-3 (Mod.)
604	1	1	2	Each	Manhole, Type A, Class B (AA-S100)
604	3	2	5	Each	Manhole, Type A, Class C (AA-S100)
604	2	1	3	Each	Manhole, Type B, Class D (AA-S101)
604	1	-	1	Each	Manhole, Type B, Class D (AA-S101) Modified w/AA-S128 Grate & Frame
604	1	-	1	Each	Manhole, Type B, Class D (AA-S101) w/Grated Lid
604	-	2	2	Each	Manhole, Type B, Class E (AA-S101)
604	-	2	2	Each	Manhole, Type B, Class E (AA-S101) Modified w/2-AA-S128 Grate & Frames
604	1	1	2	Each	Manhole, Type B, Class K (AA-S101)
604	1	-	1	Each	Headwall 12" Pipe (AA-S168)
604	1	-	1	Each	Headwall 36" Pipe (AA-S168)
604	1	-	1	Each	Endwall 12" Pipe (AA-S169)
901	295	245	540	L.F.	12" Pipe (720.08, 720.12 or 706.02 Class IV), w/ Type I Bedding (202' w/Item 912, Granular Backfill in Phase 1, 99' w/Item 912, Granular Backfill in Phase 2)
901	-	80	80	L.F.	12" Pipe (720.08, 720.12 or 706.02 Class IV), w/ Type I Bedding and w/Watertight Sanitary Joints (901.15), Trench Dam (901.17) (10' w/Item 912, Granular Backfill in Phase 2)
901	145	-	145	L.F.	12" Reinforced Concrete Pipe with Joints per ASTM C-443
901	35	655	690	L.F.	15" Pipe (720.08, 720.12 or 706.02 Class IV), w/ Type I Bedding (31' w/Item 912, Granular Backfill in Phase 1)
901	30	-	30	L.F.	15" Pipe (720.08, 720.12 or 706.02 Class IV), w/ Type I Bedding and w/Watertight Sanitary Joints (901.15), Trench Dam (901.17) (5' w/Item 912, Granular Backfill in Phase 1)
901	315	-	315	L.F.	18" Pipe (720.08, 720.12 or 706.02 Class III), w/ Type I Bedding (5' w/Item 912, Granular Backfill in Phase 1)
901	60	-	60	L.F.	18" Pipe (720.08, 720.12 or 706.02 Class IV), w/ Type I Bedding and w/Watertight Sanitary Joints (901.15), Trench Dam (901.17)
901	350	165	515	L.F.	24" Pipe (720.08, 720.12 or 706.02 Class III), w/ Type I Bedding
901	70	-	70	L.F.	24" Pipe (720.08, 720.12 or 706.02 Class IV), w/ Type I Bedding and w/Watertight Sanitary Joints (901.15), Trench Dam (901.17) (36' w/Item 912, Granular Backfill in Phase 1)
901	725	60	785	L.F.	30" Pipe (720.08, 720.12 or 706.02 Class II), w/ Type I Bedding
901	110	160	270	L.F.	30" Pipe (720.08, 720.12 or 706.02 Class II), w/ Type I Bedding and w/Watertight Joints (901.15), Trench Dam (901.17) (5' w/Item 912, Granular Backfill in Phase 1, 48' w/Item 912, Granular Backfill in Phase 2)
901	40	180	220	L.F.	36" Pipe (720.08, 720.12 or 706.02 Class II), w/ Type I Bedding (49' w/Item 912, Granular Backfill in Phase 2)
901	-	110	110	L.F.	36" Pipe (720.08, 720.12 or 706.02 Class II), w/ Type I Bedding and w/Watertight Joints (901.15), Trench Dam (901.17) (5' w/Item 912, Granular Backfill in Phase 1)
901	60	-	60	L.F.	36" Pipe (720.08, 720.12 or 706.02 Class II), w/ Type I Bedding and Concrete Encasement (36' w/Item 912, Granular Backfill in Phase 1)
WATER					
801	25	15	40	L.F.	6" Ductile Iron Water Pipe Class 53, (Include F.H. Leads)
801	1,810	1,185	2,995	L.F.	8" C900 or C909 Water Pipe & Appurtenances
802	5	3	8	Each	6" Valves w/ Std. Box (Includes Hydrant Valves)
802	7	4	11	Each	8" Valves w/ Std. Box
803	1	-	1	Each	16"x8" Tapping Sleeve and Valve and Appurtenances (w/ Heavy Duty Valve Box)
805	15	18	33	Each	3/4" Water Service (Short)
805	15	12	27	Each	3/4" Water Service (Long)
809	5	3	8	Each	Fire Hydrant (Type B)
Spec.	Lump	Lump	Lump	Sum	Survey Coordinates
LIGHTING					
1000	9	7	16	Each	Street Lights MIS-21 & MIS-150 & MIS-29
1000	9	7	16	Each	Pole-To Be Wired, MIS-41
1000	1,425	1,070	2,590	L.F.	Circuit Cable-Street Light, MIS-15, MIS-14
1000	105	70	175	L.F.	3" Rigid Steel Conduit (Under Pvmnt.) MIS-63
1000	7	4	11	Each	Pull Box, MIS-4
EROSION CONTROL					
207	13	7	20	Each	Filter Fabric Inlet Protection
207	16	8	24	Each	Dandy Curb Bag
207	1	-	1	Each	Stabilized Construction Entrance
207	910	1,115	2,025	L.F.	Orange Sediment Fence
207	1	-	1	Each	Concrete Washout Area
207	1	-	1	Each	Sediment Basin Riser Pipe
667	2,260	-	2,260	S.Y.	Seeding & Jute Matting
PAVEMENT MARKING & SIGNING					
630	40	-	40	L.F.	Sign, Flat Sheet, Type G
630	40	-	40	L.F.	Ground Mounted Support
630	4	1	5	Each	Type III Barricade
630	10	6	16	Each	Street Name Sign
630	4	3	7	Each	Street Name Sign Support
644	40	-	40	L.F.	Channelizing Line
644	110	-	110	L.F.	Center Line, Double Yellow
644	1	-	1	Each	Word on Pavement, 72 Inch
644	2	-	2	Each	Lane Arrow

HORIZ SCALE



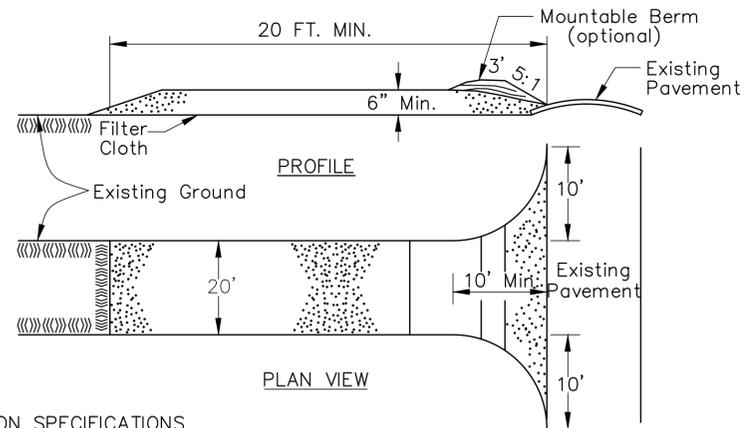
CALCULATED CHECKED

ESTIMATE OF QUANTITIES

PROJECT NAME



STABILIZED CONSTRUCTION ENTRANCE



CONSTRUCTION SPECIFICATIONS

1. Stone Size – Use 2 inch stone, or reclaimed or recycled concrete equivalent.
2. Length – As required.
3. Thickness – Not less than six (6) inches.
4. Width – Twenty (20) foot minimum, but not less than the full width at points where ingress or egress occurs.
5. Filter Cloth – will be placed over the entire area prior to placing of stone.
6. Surface Water – All surface water flowing or diverted toward construction entrances shall be piped across the entrance. If piping is impractical, a mountable berm with 5:1 slopes will be permitted.
7. Maintenance – The entrance shall be maintained in a condition which will prevent tracking or flowing of sediment onto public right-of-way. This may require periodic top dressing with additional stone as conditions demand and repair and/or cleanout of any measures used to trap sediment. All sediment spilled, dropped, washed or tracked onto public rights-of-way must be removed immediately.
8. Washing – Wheels shall be cleaned to remove sediment prior to entrance onto public right-of-ways. When washing is required, it shall be done on an area stabilized with stone and which drains into an approved sediment trapping device.
9. Periodic inspection and needed maintenance shall be provided after each rain.

Construction Sequence

1. Install required sediment fence and inlet protection on existing inlets as shown on Phase 1 Plan.
2. Install utilities and storm sewers. Provide inlet protection.
3. Construct proposed street and utilities.
4. Stabilize the disturbed areas per temporary and permanent seeding requirements.
5. Remove storm sewer inlet protection.

Note A: The Contractor shall be responsible for maintaining on-site drainage at all times during construction. No separate payment shall be made for maintaining drainage.

EROSION AND SEDIMENT CONTROL QUANTITIES

ITEM	TOTAL QUANTITY				UNIT	DESCRIPTION
	27	28	29	TOTAL		
207	-	225	3350	3575	LIN. FT.	PERIMETER FILTER FABRIC FENCE
207	-	1	-	8	EACH	CURB INLET PROTECTION
207	3	23	-	76	EACH	CATCH BASIN PROTECTION
207	-	15	4	36	EACH	FILTER FABRIC CATCH BASIN PROTECTION
207	7	2	2	11	EACH	ROCK CHECK DAM
207	-	-	1	1	EACH	STABILIZED CONSTRUCTION ENTRANCE
207	-	-	1	1	EACH	CONCRETE WASHOUT AREA

NOTE TO CONSULTANTS:

INCLUDE ALL ESC/SWP3 PAY ITEMS TO THE QUANTITY TABLE, SUCH AS, BUT NOT LIMITED TO, SITE STABILIZATION (SEED, SOD, GEOTEXTILES, STRAW, OR COMPOST BLANKETS, STRAW WATTLES, COMPOST FILTER SOCKS); TEMPORARY SEDIMENT RISERS AND SKIMMERS

LEGEND

	Catch Basin Protection		Perimeter Filter Fabric Fence
	Curb Inlet Protection		Stabilized Construction Entrance
	Filter Fabric Fence		Concrete Washout
	Structure Number		

This SWP3 plan must be posted on-site. A copy of the SWP3 plan and the approved OEPA storm water permit (with site specific NOI number) must be kept on-site at all times.

Direct discharge of sediment laden water to the city's sewer system or a receiving stream is a violation of Ohio EPA and City of Columbus regulations; the contractor will be held liable for the violation and subsequent fines.

PAVEMENT CUTTING, SAWING AND EXCAVATION OPERATIONS NOTE:
 Pursuant to Phase II regulations of the NPDES amendment to the Clean Water Act of the United States of America, all public agencies and private contractors performing pavement-cutting operations on City of Columbus streets and roadways shall protect our environment from the diminutive discharges created by their pavement cutting operations.

This requirement includes but is not limited to wet or dry saw-cutting, jack hammering, excavation equipment use, etc. The public agency and/or private contractor work crews shall recover and dispose of particles, polluted waters, or other such small discharges resulting from their pavement cutting operations and protect all storm sewer inlets from receiving runoff of said diminutive discharges. The agency or contractor responsible for each pavement cutting activity shall be solely liable for Notice of Violations (NOV/s) and fines issued by city of Columbus and/or State of Ohio authorities.

Equipment, materials and methods shall be provided by the responsible public agency and/or private contractor to work crews performing the pavement cutting activity and made available to work crews for use in cleaning up the small discharges resulting from such cutting activities and preventing runoff. Additionally, work crews shall be trained to exercise and employ equipment, materials, and environmental protective measures, to prevent discharges from entering the City of Columbus storm sewer systems and watercourses. All pay and work items with pavement cutting, sawing, or excavation shall abide by this note.

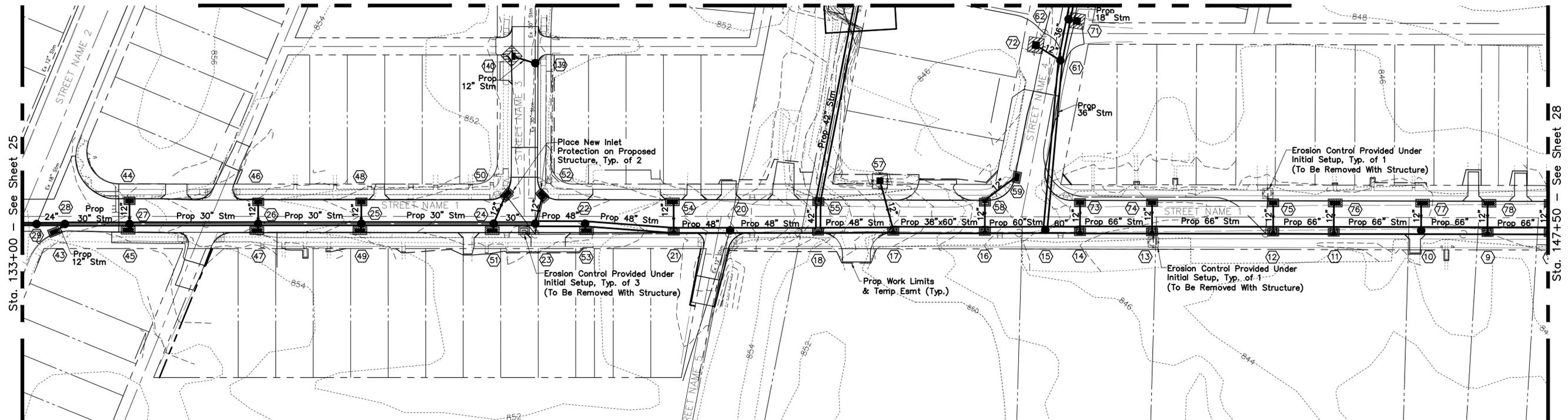
Moreover, if project plans, notes and /or drawings include a Stormwater Pollution Prevention Plan (SWP3) or a spill prevention/remediation plan; such plans shall be adhered to in addition to this note for all pavement cutting, sawing, or excavation operations on City of Columbus streets and roadways.

Suggested inlet protection is provided in the project documents under typical inlet protection dwg.1. The engineer shall approve alternative methods of inlet protection.

NOTE TO CONSULTANTS:

IF SWP3 OR SPILL PREVENTION/REMEDATION PLANS ARE INCLUDED IN CONTRACT DOCUMENTS, THEY SHOULD BE CITED IN THE PARAGRAPH ABOVE BY VOLUME, PAGE OR SHEET NUMBERS; SO DIRECTING THE READER TO SUCH PLAN.

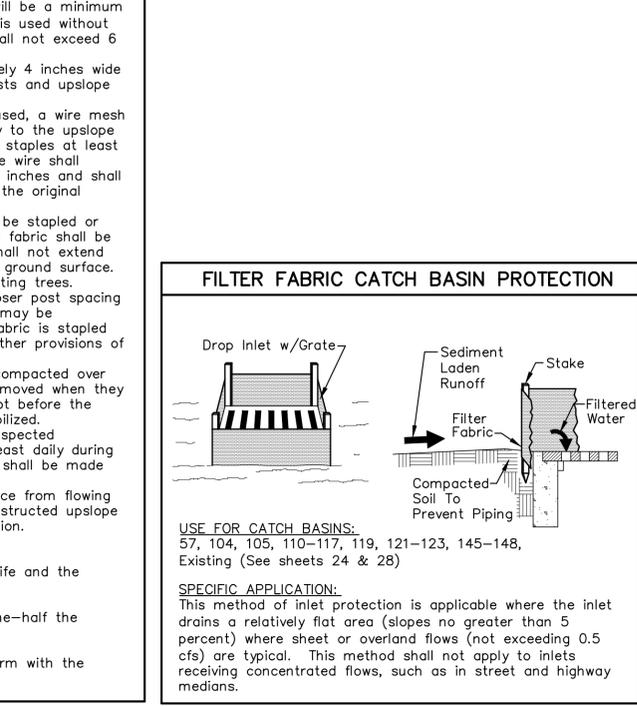
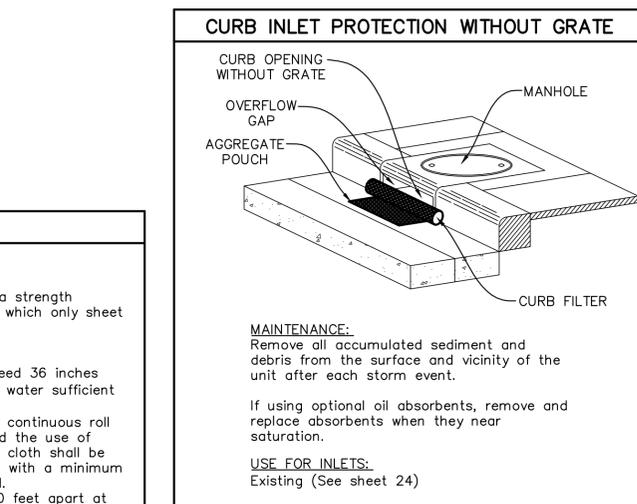
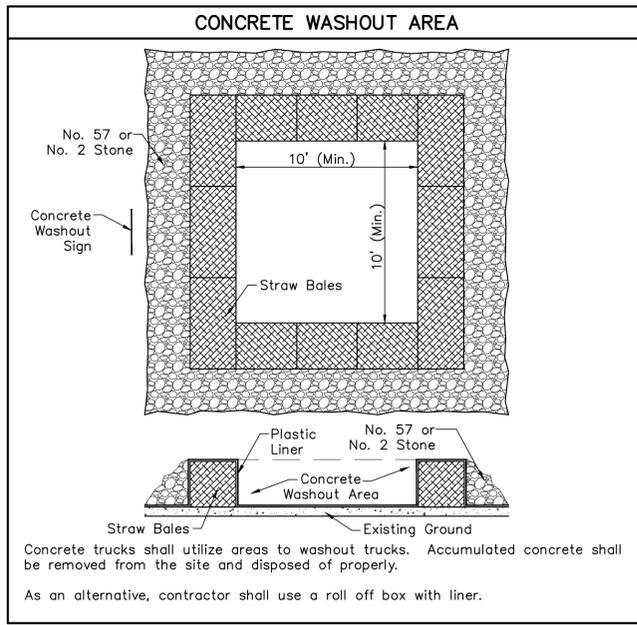
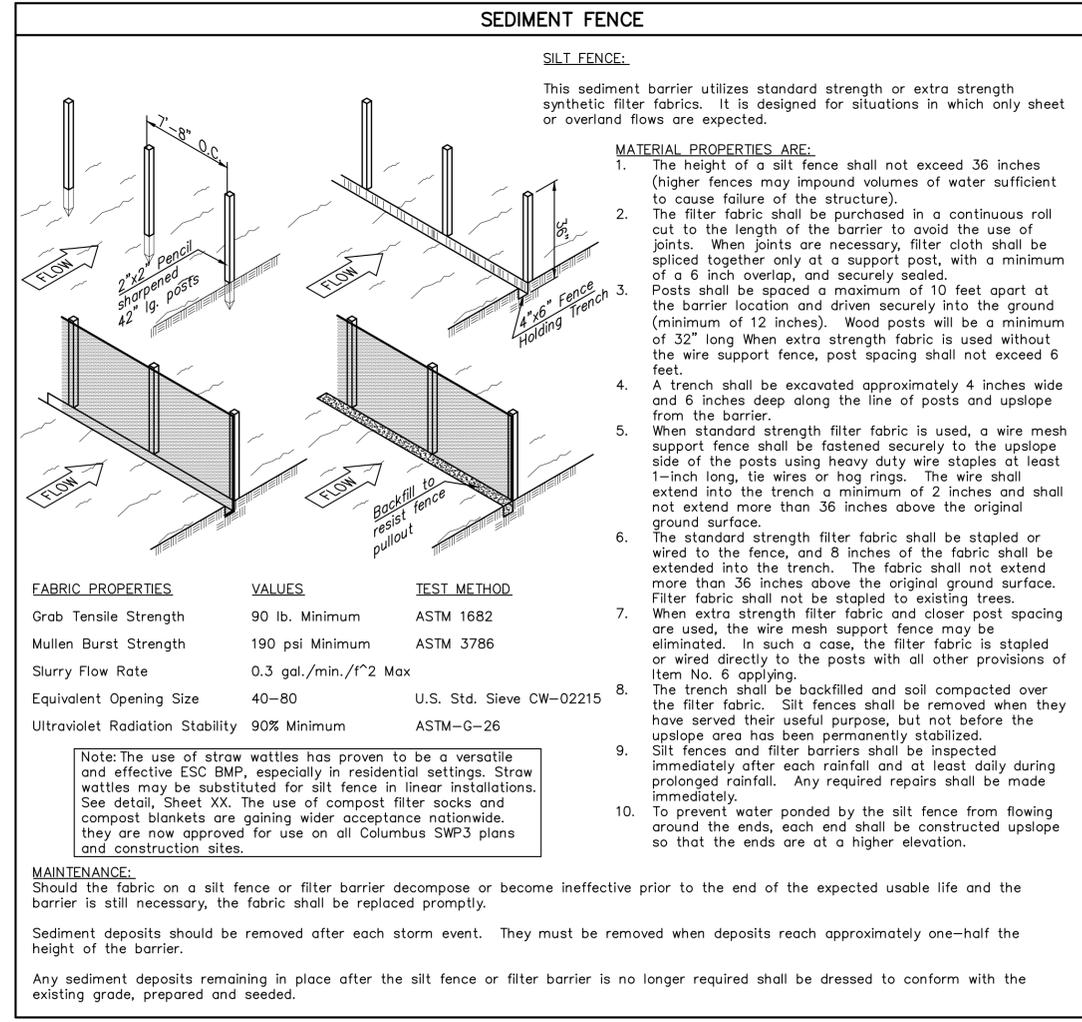
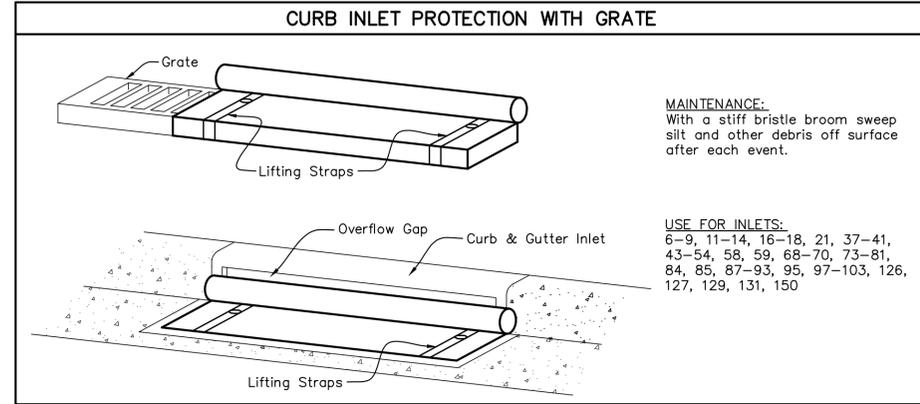
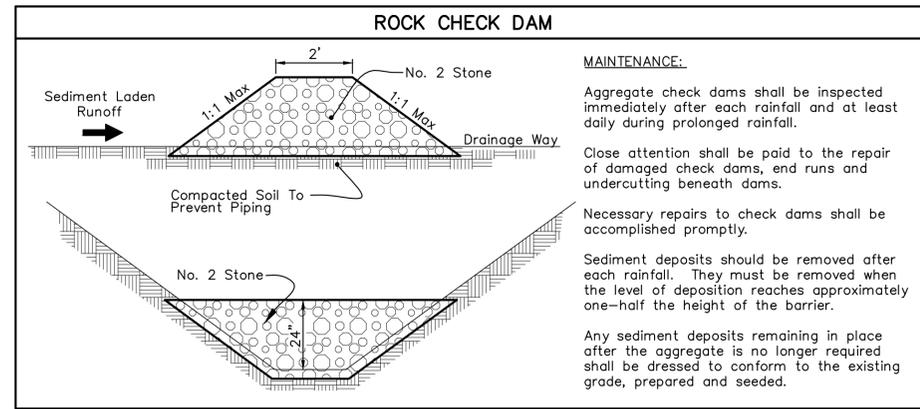
Matchline – See Sheet 27



HORIZ. SCALE
 1" = 25'
 CALCULATED
 CHECKED
 STORM WATER POLLUTION PREVENTION PLAN
 PROJECT NAME
 XXXX-E

REVISED 7/2/14
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REVISÉ 6/27/14
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CONTRACTOR RESPONSIBILITY: Details have been provided on the plans in an effort to help the Contractor provide erosion and sedimentation control. The details shown on the plan shall be considered a minimum. Additional or alternate details may be found in the O.D.N.R. Manual "Rainwater and Land Development". The Contractor shall be solely responsible for providing necessary and adequate measures for proper control of erosion and sediment runoff from the site along with proper maintenance and inspection in compliance with the NPDES General Permit for Storm Water Discharges Associated with Construction Activity.

Prior to Construction Operations in a particular area, all sedimentation and erosion control features shall be in place. Field adjustments with respect to locations and dimensions may be made by the Engineer.

The Contractor shall place inlet and channel protection for erosion control immediately after construction of the inlets or channels which are not tributary to a sediment basin or dam.

It may become necessary to remove portions of the barrier during construction to facilitate the grading operations in certain areas. However, the barrier shall be in place in the evening or during any inclement weather.

The limits of seeding and mulching are as shown within the plans. Those areas disturbed outside the seeding limits shall be seeded and mulched at the Contractor's expense.

"Temporary seeding" No area for which grading has been completed or where a denuded area will remain idle for more than 21 days shall be left unseeded for longer than 7 days. If permanent seed is not applied at this time, temporary seeding shall be done at the following rates:

March 1 to August 15
 Seed: Oats 2 lbs./1,000 Sq.Ft.
 Fertilizer: (12:12:12) 25 lbs./1,000 Sq.Ft.
 Mulch: (Straw or Hay) 2 tons/acre

August 15 to November 1
 Seed: Annual Rye 2 lbs./1,000 Sq.Ft.
 Fertilizer: (12:12:12) 25 lbs./1,000 Sq.Ft.
 Mulch: (Straw or Hay) 2 tons/acre

November 1 to March 1
 Mulch (ONLY): (Straw or Hay) 2 tons/acre

"Permanent seeding" shall be done between March 15 and September 15. If seeding is done between September 15 and March 15, it shall be classified as "Temporary Seeding." Permanent seed shall be 40% Kentucky Bluegrass, 40% Creeping Red Fescue, 20% Annual Ryegrass. Permanent seeding shall consist of fertilizing, watering and seeding rates indicated under Item 659. Seeding shall be applied within two (2) days after final grading or following seed bed preparation.

Rates of application of Item 659:
 Seed: 4 lbs./1,000 Sq.Ft.
 Fertilizer: (12:12:12) 20 lbs./1,000 Sq.Ft.
 Mulch: Straw (Hay) 2 tons/acre (3 tons/acre)

MAINTENANCE: It is the Contractor's responsibility to maintain the sediment control features used on this project. The site shall be inspected periodically and within 24 hours of a significant rainfall. Records of these inspections shall be kept and made available to jurisdictional agencies if requested. Any sediment or debris which has reduced the efficiency of a structure shall be removed immediately. Should a structure or feature become damaged, the Contractor shall repair or replace at no additional cost to the Owner. Not all details shown on this sheet may be required for this project. Reference Sediment Control Plan.

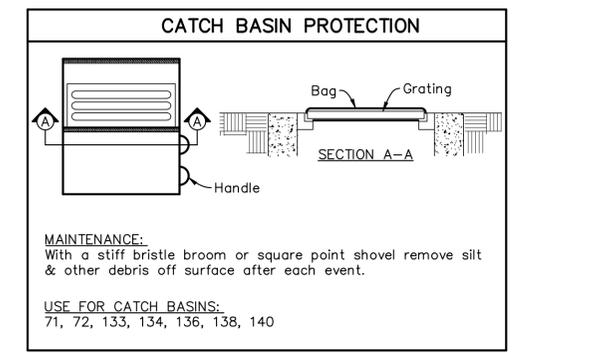
The cost for temporary channels, sediment dams, sediment basins, and other appurtenant earthmoving operations shall be included in the price bid for erosion and sedimentation control quantities.

Not all details shown on this sheet may be required for this project.
 The Contractor shall be responsible to ensure that off-site tracking of sediments by vehicles and equipment is minimized. All such off-site sediment shall be cleaned up daily. Construction of stabilized construction entrances are a part of that responsibility.

Street Cleaning (on an as-needed basis) is required through the duration of this construction project. This includes sweeping, power cleaning and (if necessary) manual removal of dirt or mud in the street gutters.

The Contractor shall be responsible to ensure that no solid or liquid waste is discharged into stormwater runoff. Sediment-laden water shall be filtered through the use of sediment filtering fences or sedimentation basins prior to discharge to surface waters. Concrete trucks will not be allowed to wash out or discharge surplus concrete into or alongside rivers, streams, and creeks or into natural or man-made channels or swales leading thereto. Concrete truck wash water and surplus concrete shall be confined to areas approved by the Engineer; after solidifying, these waste materials shall be removed from the site.

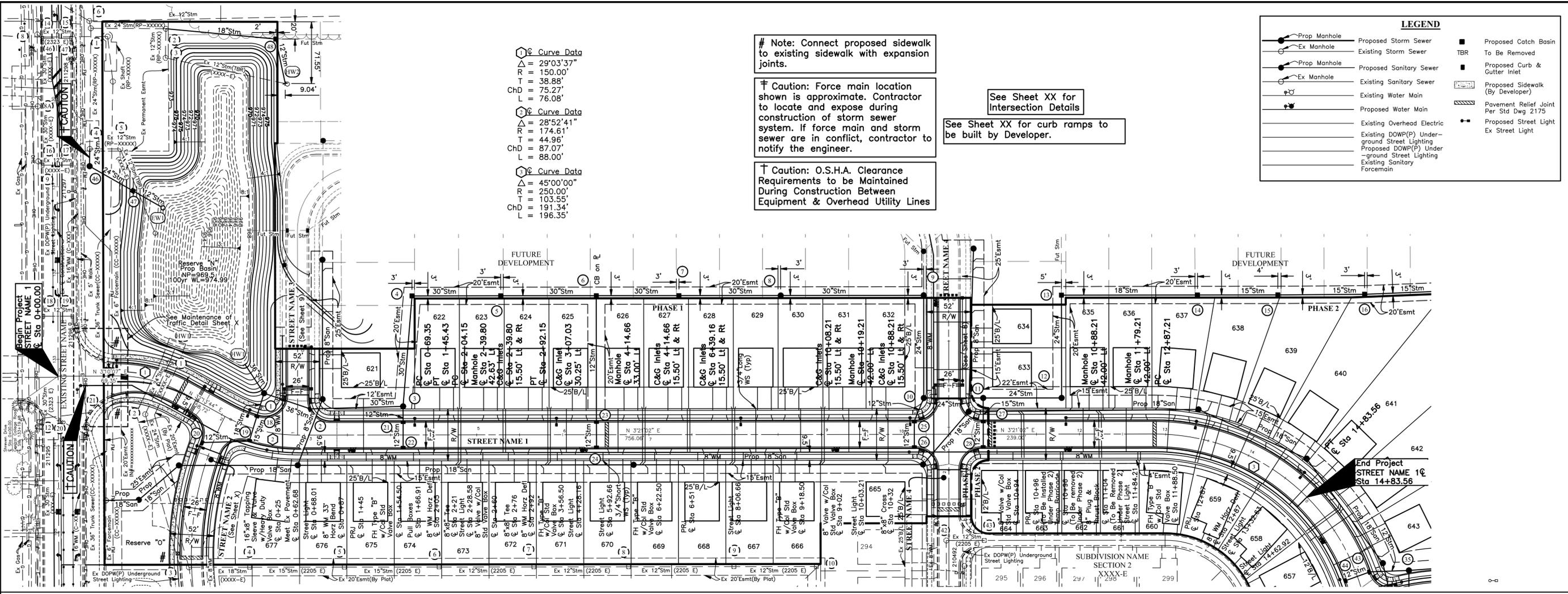
ALL EROSION & SEDIMENT CONTROL PRACTICES ARE SUBJECT TO FIELD MODIFICATION AT THE DIRECTION OF THE CITY OF COLUMBUS AND/OR OHIO EPA.



OEPA NOI #:
 PLAN DESIGNER:
 OWNER:
 PROJECT DESCRIPTION:
 EXISTING SITE CONDITIONS:
 SITE DISTURBANCE:
 RECEIVING STREAM:
 ADJACENT AREAS:
 CRITICAL AREAS:
 EROSION AND SEDIMENT MEASURES:
 PERMANENT STABILIZATION:
 MAINTENANCE:
 SCHEDULE:
 SITE CONTACT:

ENTITY:
 ADDRESS:
 CONTACT NAME:
 PHONE:
 EMAIL:
 ADDRESS:
 CONTACT NAME:
 PHONE:
 EMAIL:
 The project consists of approximately 2,100 feet of roadway reconstruction, 700 feet of sidewalk / shared use path addition (beyond roadway reconstruction area), 4,500 feet of storm sewer replacement / installation (beyond roadway reconstruction and sidewalk / path installation areas), 1,100 feet of ditch regrading, 1,100 feet of stream restoration and the establishment of a regional detention basin. The roadway reconstruction and sidewalk / path installation areas include replacements or additions of storm sewers, waterlines, traffic signals, and street lighting.
 The entire project Corridor discharges directly to the Linden Ditch (Argyle Ditch). Storm water reaches Linden Ditch via existing storm sewer systems.
 Project earth disturbance area is: XX acres
 Alum Creek
 The project corridor is located within a residential area and commercial area.
 Work will occur in existing stream channels in the area of the proposed detention basin and box culvert at Parkwood Avenue.
 Erosion and sediment will be controlled by the use of inlet protection at storm sewer inlets and the use of construction techniques to minimize the disturbance along the existing channel. To the extent practical, "clean water" from the upstream watershed will be diverted around the in-stream construction activities and sediment-laden water from the construction area will be filtered prior to being released to the downstream channel.
 All disturbed areas shall be seeded and mulched. Geotextile reinforcement of earthen embankment is specified when in vicinity of channel banks. Hardened, non-erodible materials area also specified for channel bank reinforcement.
 All erosion control devices are to be inspected by the construction superintendent daily and after rainfalls. Any damaged facilities are to be replaced / repaired immediately as may be necessary.
 The Contractor shall provide a schedule of operations to the City. Sedimentation and erosion control features shall be placed and maintained in accordance with this schedule.
 ENTITY:
 PROJECT ENGINEER:
 PHONE:
 EMAIL:

HORIZ. SCALE: 1" = 100'
 VERT. SCALE: 1" = 10'
 CALCULATED: [] CHECKED: []
 STORM WATER POLLUTION PREVENTION PLAN
 PROJECT NAME: []
 XXXX-E



Curve Data

Curve 1	29°03'37"
Curve 2	150.00'
Curve 3	38.88'
Curve 4	75.27'
Curve 5	76.08'
Curve 6	28°52'41"
Curve 7	174.61'
Curve 8	44.96'
Curve 9	87.07'
Curve 10	88.00'
Curve 11	45°00'00"
Curve 12	250.00'
Curve 13	103.55'
Curve 14	191.34'
Curve 15	196.35'

Note: Connect proposed sidewalk to existing sidewalk with expansion joints.

† Caution: Force main location shown is approximate. Contractor to locate and expose during construction of storm sewer system. If force main and storm sewer are in conflict, contractor to notify the engineer.

‡ Caution: O.S.H.A. Clearance Requirements to be Maintained During Construction Between Equipment & Overhead Utility Lines

See Sheet XX for Intersection Details

See Sheet XX for curb ramps to be built by Developer.

LEGEND

	Proposed Storm Sewer		Proposed Catch Basin
	Existing Storm Sewer		To Be Removed
	Proposed Sanitary Sewer		Proposed Curb & Gutter inlet
	Existing Sanitary Sewer		Proposed Sidewalk (By Developer)
	Existing Water Main		Pavement Relief Joint Per Std Dwg 2175
	Proposed Water Main		Proposed Street Light Ex Street Light
	Existing Overhead Electric		
	Existing DOWP(P) Under-ground Street Lighting		
	Proposed DOWP(P) Under-ground Street Lighting		
	Existing Sanitary Forecman		

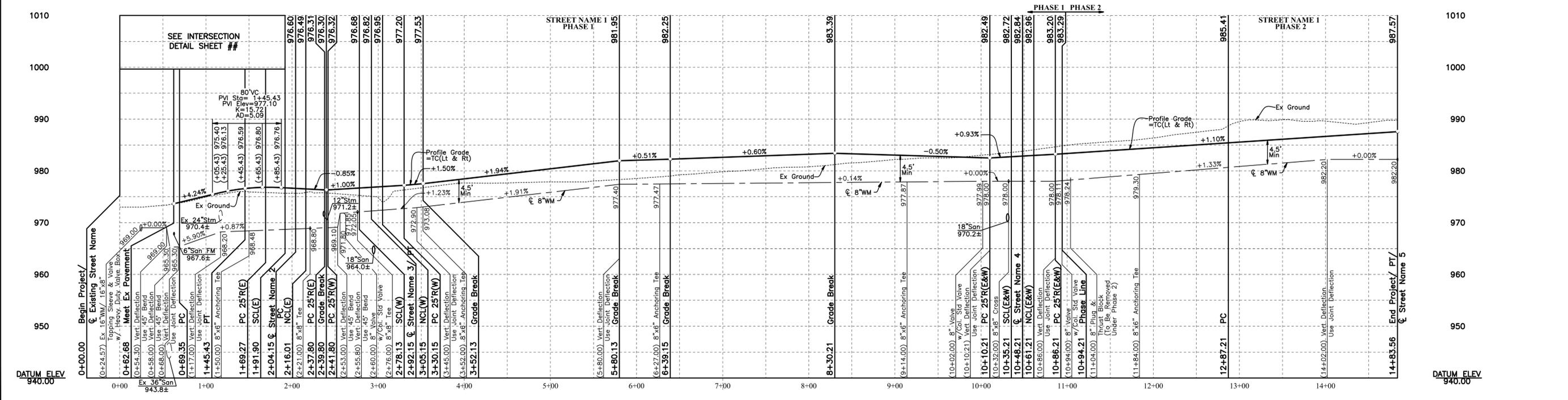


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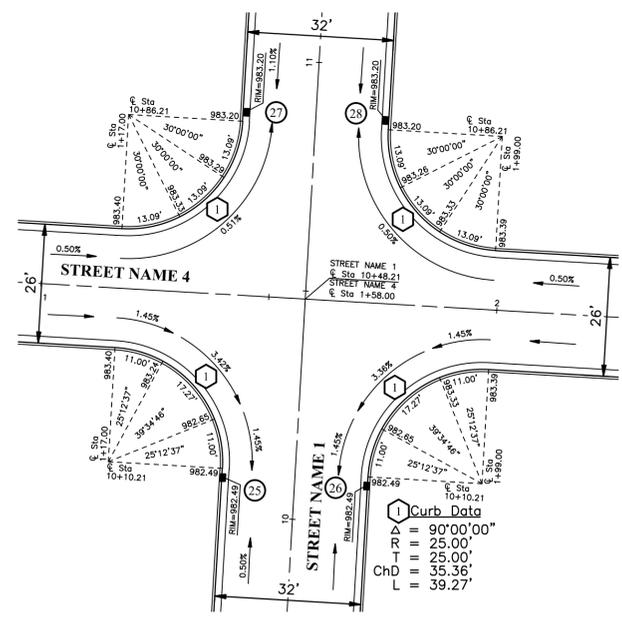
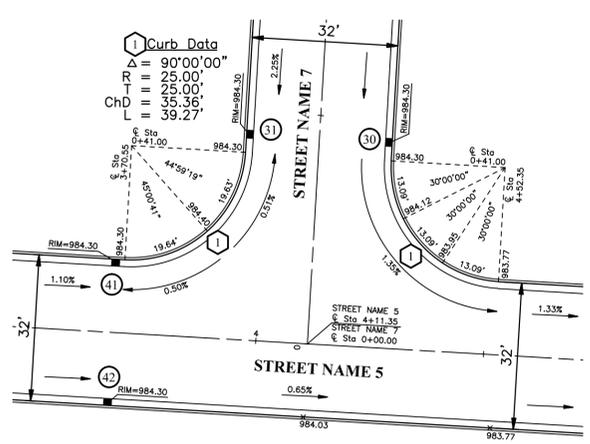
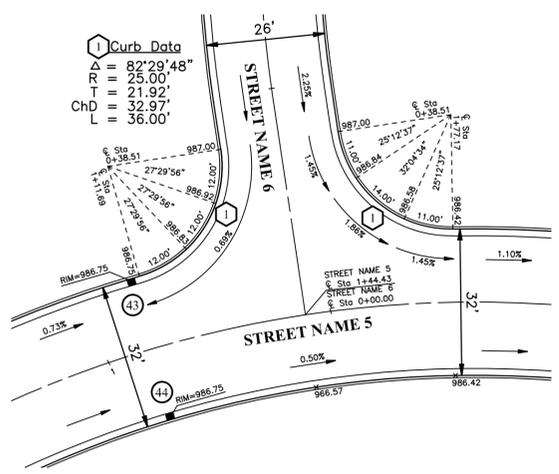
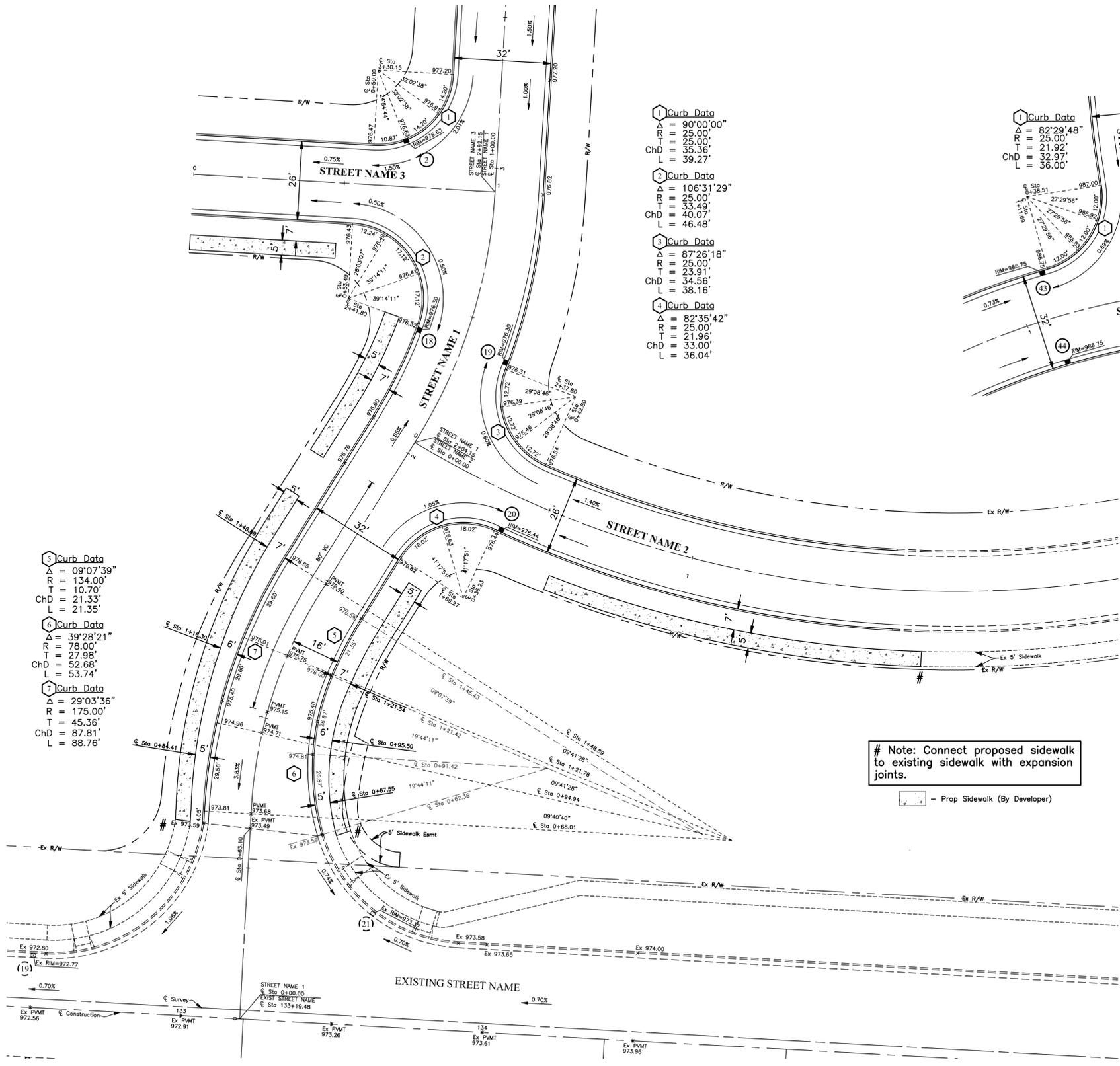
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PLAN & PROFILE

STREET NAME(S)



PROJECT NAME

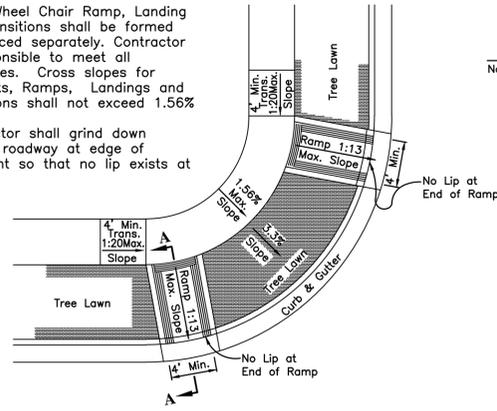


NOTE: See Sheet X-X for curb ramps to be built by Developer.

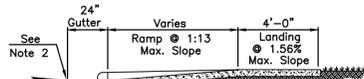
PLAN VIEW

- NOTES:
1. Curb, Wheel Chair Ramp, Landing and Transitions shall be formed and placed separately. Contractor is responsible to meet all tolerances. Cross slopes for Sidewalks, Ramps, Landings and Transitions shall not exceed 1.56%
 2. Contractor shall grind down asphalt roadway at edge of pavement so that no lip exists at gutter.

NOTE: This drawing depicts a typical 26' wide street in a 50' R/W, 20' Radius on Face of Curb.



NOTE: All handicap ramp curb drops are to be poured curb drops.



SECTION "A-A"

Curb ramps shall be constructed to the latest City Standards, meeting all requirements as to shape, materials and finish.

LEGEND

- ⊗ - Water Valve
- ⊙ - Fire Hydrant
- - Manhole
- ⊙ - Street Light
- ⊙ - Pull Box
- - Curb Inlet
- ▨ - Prop Driveway (By Home Builder)
- ▨ - Detectable warning tape
- ▨ - Prop Sidewalk (By Developer)
- ▨ - Prop Sidewalk (By Home Builder)

Note: Curb Ramps are 5' wide.

COORDINATE TABLE - CENTERLINE PINS

CENTERLINE PIN	INTERSECTION		AS-BUILT	
			NORTHING	EASTING
Pin #1	STREET NAME 5	STREET NAME 6	XXXXXX.XXXX	XXXXXX.XXXX
Pin #2	STREET NAME 5	STREET NAME 7	XXXXXX.XXXX	XXXXXX.XXXX

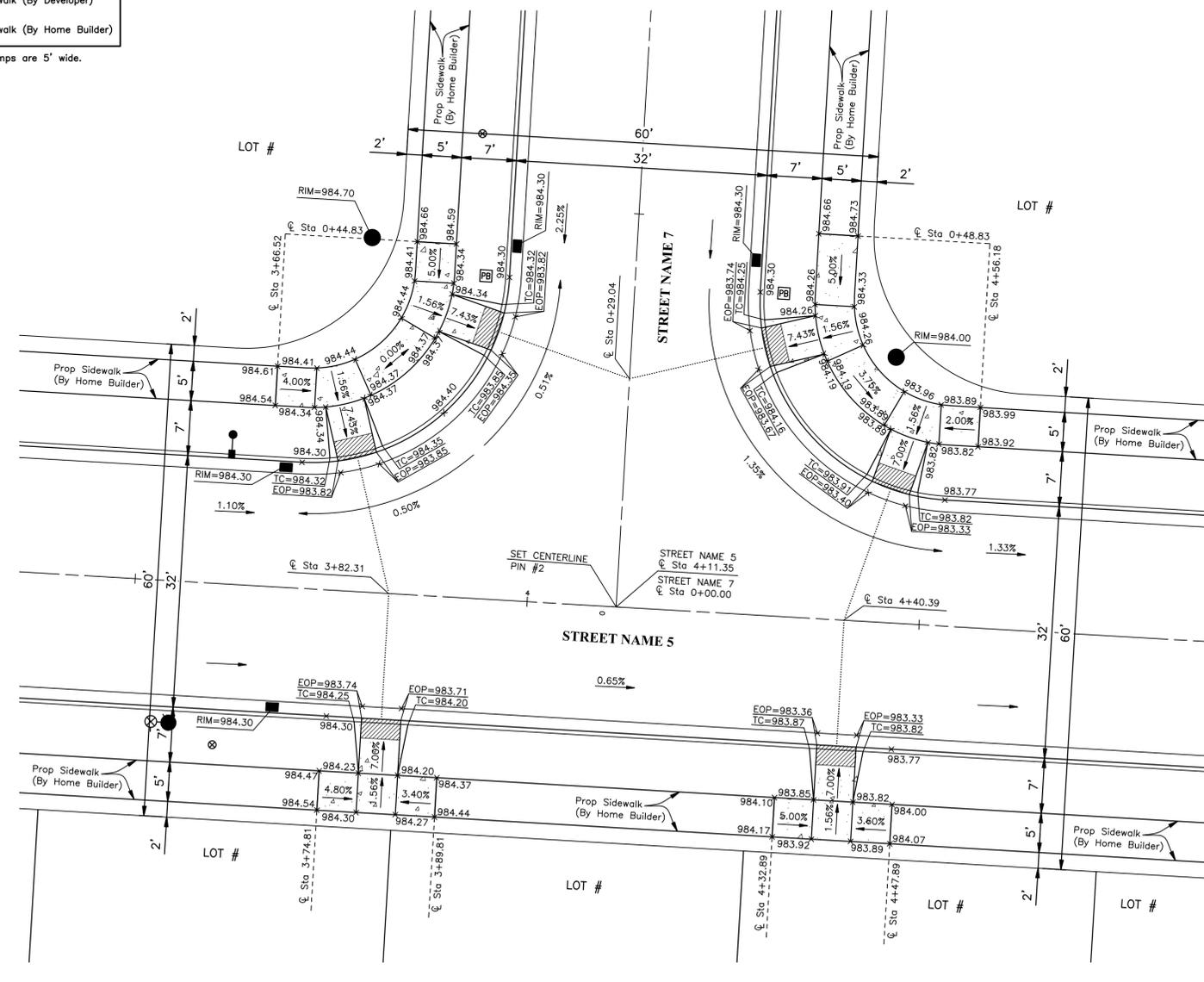
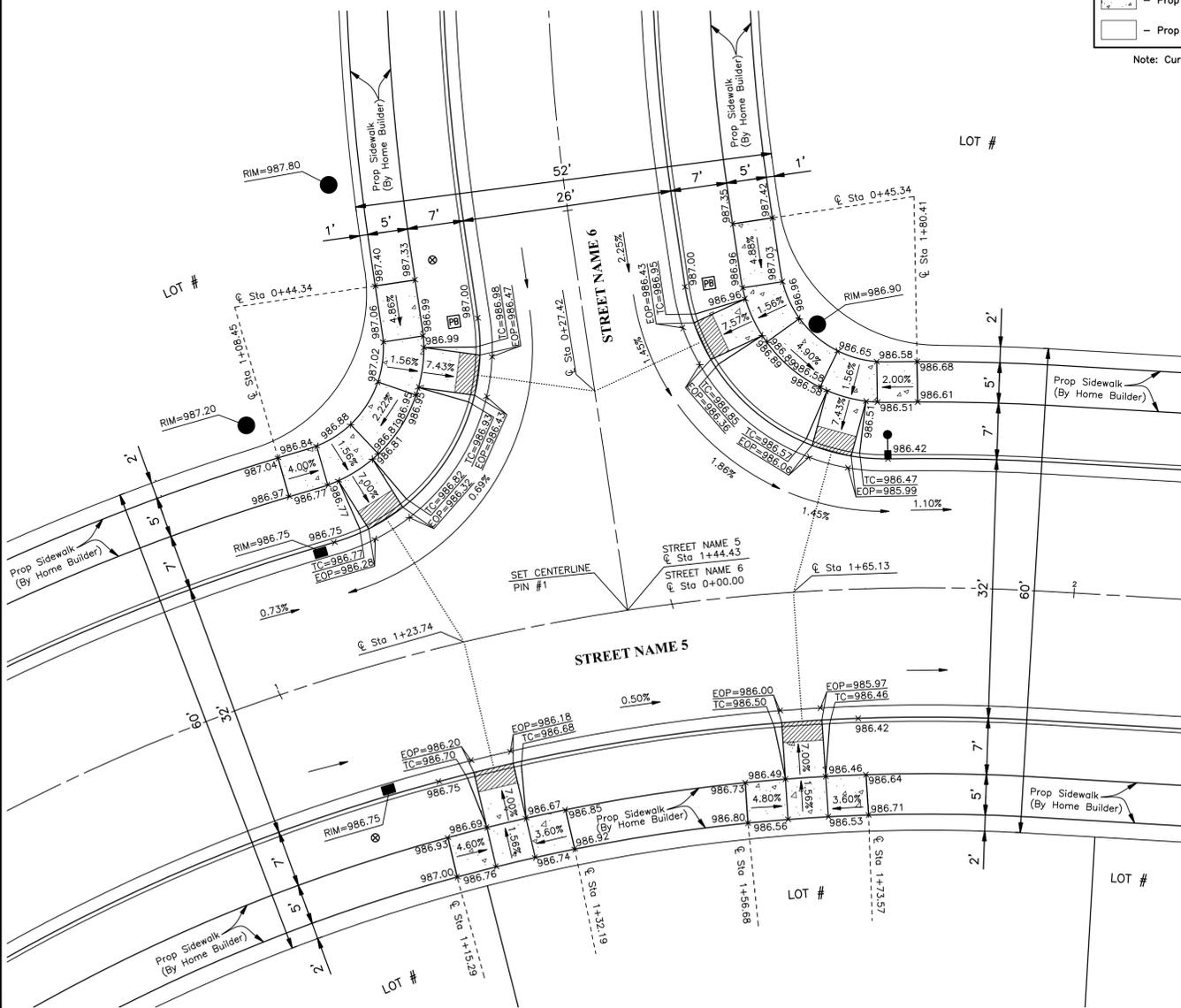
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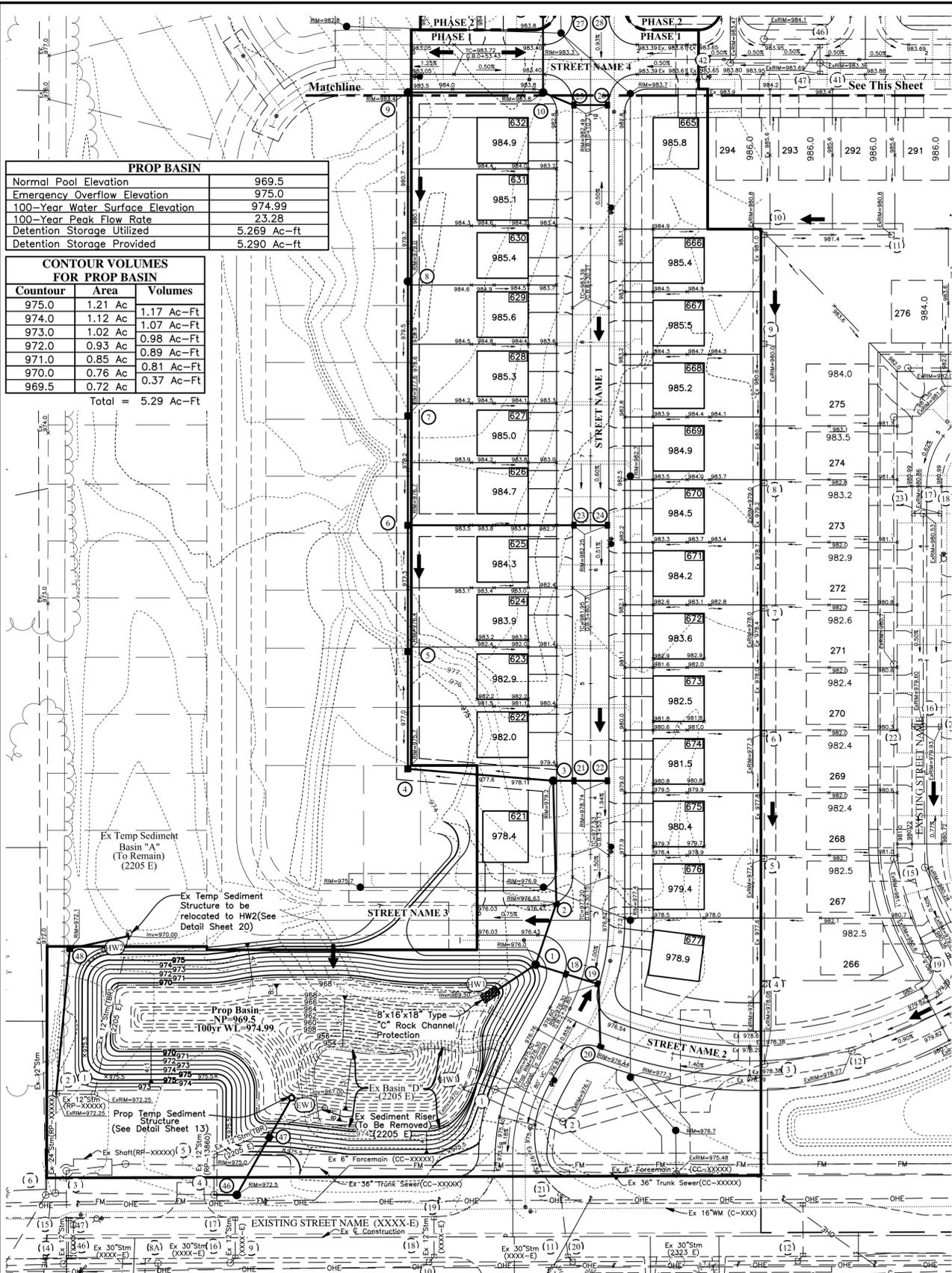


DETAILS -
CURB RAMPS AT INTERSECTIONS

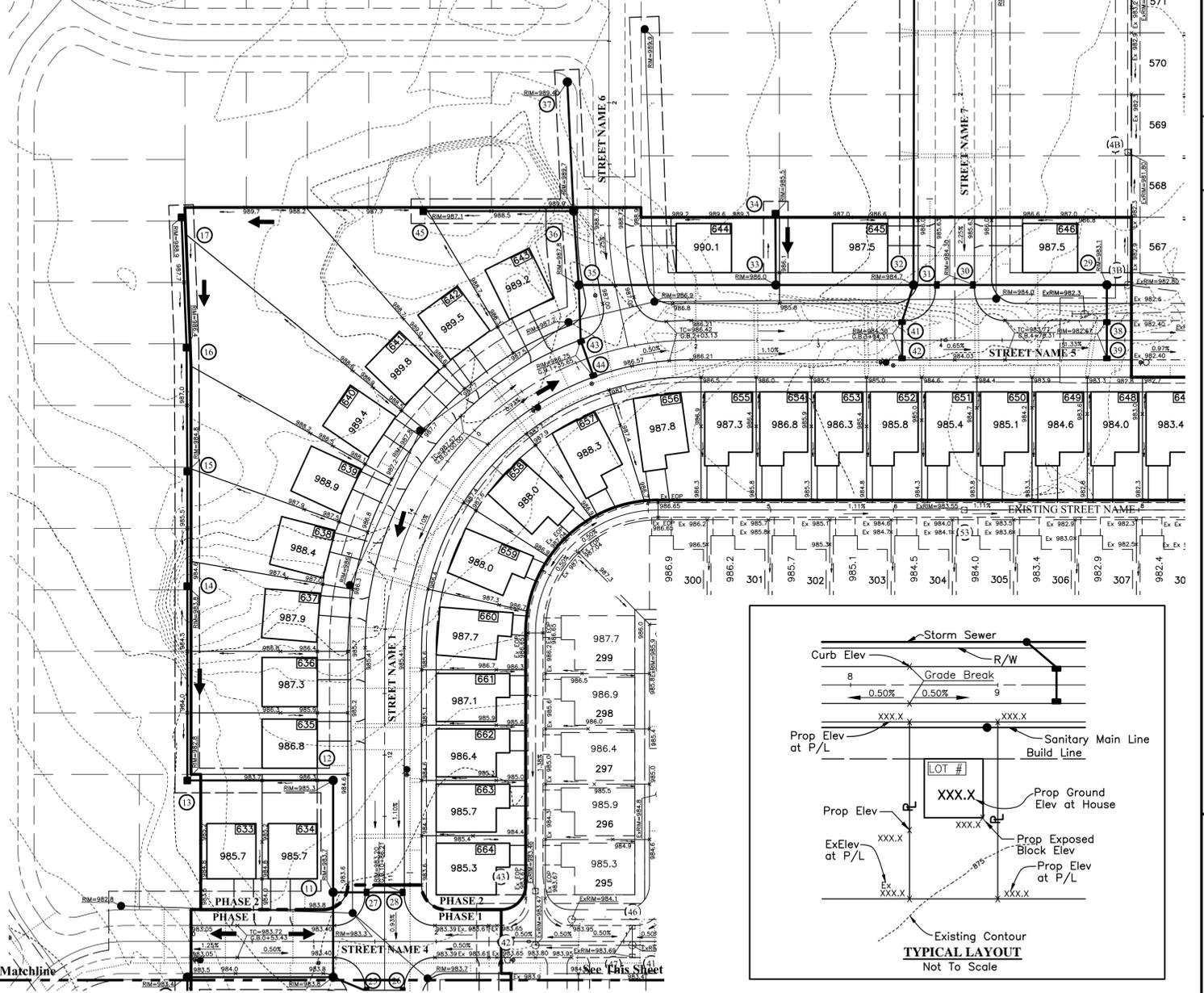
PROJECT NAME

XXXX-E





Storm Event	Max Pool Elevation at Retention Pond (Ft)	Detention Storage Utilized at Retention Pond (Ac-Ft)	PROP BASIN			Allowable Discharge (cfs)
			Max. Outflow from Retention Pond (cfs)	Peak Flow Released from Uncontrolled Areas (cfs)	Total Peak Flow Leaving Project Site (Combined Hydrographs) (cfs)	
1-Year	970.88	1.077	3.26	0.87	3.35	<8.42
2-Year	971.48	1.593	5.03	1.57	5.19	<8.42
5-Year	972.28	2.328	6.66	2.55	6.91	<8.42
10-Year	972.91	2.954	7.74	3.39	8.24	<8.42
25-Year	973.65	3.726	15.48	4.76	16.00	<25.33
50-Year	974.30	4.452	19.92	6.03	20.61	<25.33
100-Year	974.99	5.266	23.28	7.40	24.21	25.33



LEGEND		
	Proposed Storm Sewer	Proposed Top of Casting
	Existing Storm Sewer	Proposed Top of Curb/Proposed Grade
	Proposed Sanitary Sewer	Proposed Pavement Shot
	Existing Sanitary Sewer	Existing Top of Casting
	Existing/Proposed Water Main	Existing Top of Curb
	Proposed 1' Int. Contour	Existing Pavement Shot
	Proposed 5' Int. Contour	Existing Manhole
	Existing 1' Int. Contour	Existing Manhole
	Existing 5' Int. Contour	Existing Manhole
	Proposed Headwall/Endwall	Flood Routing Arrow
	Proposed Catch Basin	Emergency Flood Routing Arrow
	Proposed Curb & Gutter Inlet	Lot Number

STORM SEWER COORDINATE DATA							
PHASE	STRUCTURE	PROPOSED			AS BUILT		
		NORTHING	EASTING	ELEVATION	NORTHING	EASTING	ELEVATION
1	HW1	765443.1428	1868084.5487	XXX.XX			
	1	765463.1414	1868119.1381	XXX.XX			
	2	765515.8380	1868140.5214	XXX.XX			
	3	765623.4468	1868144.0679	XXX.XX			
	4	765641.4017	1868016.9000	XXX.XX			
	5	765744.2256	1868022.9199	XXX.XX			
	6	765854.9803	1868029.4042	XXX.XX			
	7	765950.8717	1868035.0182	XXX.XX			
	8	766068.6700	1868041.9149	XXX.XX			
	9	766234.4419	1868051.6202	XXX.XX			
	10	766227.4869	1868170.4167	XXX.XX			
	11	766296.3689	1868174.4495	XXX.XX			
	12	766387.2134	1868179.7681	XXX.XX			
	13	766394.1684	1868060.9715	XXX.XX			
14	766551.8983	1868070.2060	XXX.XX				
2	15	766645.0399	1868075.6591	XXX.XX			
	16	766745.6008	1868080.9619	XXX.XX			
	17	766851.6598	1868083.0556	XXX.XX			
1	18	765453.6270	1868144.5450	XXX.XX			
	19	765442.5894	1868173.5139	XXX.XX			
	20	765387.2464	1868171.8527	XXX.XX			
	21	765622.4240	1868161.5380	XXX.XX			
	22	765620.6121	1868192.4850	XXX.XX			
	23	765846.5320	1868174.6587	XXX.XX			
	24	765844.7202	1868205.6057	XXX.XX			
	25	766214.9569	1868196.2285	XXX.XX			
	26	766213.1450	1868227.1755	XXX.XX			
	27	766294.8201	1868200.9042	XXX.XX			
	28	766293.0083	1868231.8512	XXX.XX			
2	29	766752.6450	1868833.2432	XXX.XX			
	30	766758.9864	1868724.9287	XXX.XX			
	31	766760.7982	1868693.9817	XXX.XX			
	32	766761.8650	1868675.7609	XXX.XX			
	33	766768.4254	1868563.7047	XXX.XX			
	34	766826.3468	1868566.7439	XXX.XX			
	35	766777.8152	1868403.3220	XXX.XX			
	36	766837.9665	1868402.4935	XXX.XX			
	37	766943.0988	1868403.6609	XXX.XX			
	38	766723.1954	1868831.5190	XXX.XX			
	39	766692.2484	1868829.7072	XXX.XX			
	40	767113.2193	1868697.0844	XXX.XX			
	41	766732.9559	1868664.8045	XXX.XX			
	42	766702.0089	1868662.9927	XXX.XX			
	43	766732.5518	1868402.2517	XXX.XX			
	44	766702.8258	1868411.0473	XXX.XX			
	45	766845.1246	1868280.2281	XXX.XX			
1	Ex 4	765278.0020	1867824.6270	XXX.XX			
	46	765276.6194	1867844.5792	XXX.XX			
	47	765325.3081	1867876.0976	XXX.XX			
	EW1	765356.7696	1867896.4641	XXX.XX			
	Ex 2	765374.4739	1867690.9458	XXX.XX			
	48	765501.2345	1867710.4558	XXX.XX			
	HW2	765509.1319	1867762.5710	XXX.XX			

STORM SEWER DATA				
PHASE	STRUCTURE	DIRECTION	DISTANCE	SIZE
1	HW1-1	N 59°57'53" E	39.95'	36"
	1-2	N 22°05'11" E	56.87'	36"
	2-3	N 01°53'16" E	107.67'	30"
	3-4	N 81°57'49" W	128.43'	30"
	4-5	N 03°21'02" E	103.00'	30"
	5-6	N 03°21'02" E	110.94'	30"
	6-7	N 03°21'02" E	96.06'	30"
	7-8	N 03°21'02" E	118.00'	30"
	8-9	N 03°21'02" E	166.06'	30"
	9-10	S 86°38'58" E	119.00'	24"
	10-11	N 03°21'02" E	69.00'	24"
	11-12	N 03°21'02" E	91.00'	24"
	12-13	S 86°38'58" E	119.00'	24"
	13-14	N 03°21'02" E	158.00'	18"
2	14-15	N 03°21'02" E	93.30'	15"
	15-16	N 03°01'07" E	100.70'	15"
	16-17	N 01°07'51" E	106.08'	15"
1	1-18	S 69°28'12" E	27.13'	18"
	18-19	S 69°28'12" E	31.00'	15"
	19-20	S 01°43'10" W	55.37'	12"
	3-21	N 86°38'58" W	17.50'	12"
	21-22	S 86°38'58" E	31.00'	12"
	6-23	S 86°40'17" E	145.50'	12"
	23-24	S 86°38'58" E	31.00'	12"
	10-25	S 64°06'23" E	28.69'	12"
	25-26	S 86°38'58" E	31.00'	12"
	11-27	S 86°38'58" E	26.50'	15"
	27-28	S 86°38'58" E	31.00'	12"
	Ex 3B-29	N 86°38'58" W	17.00'	36"
	29-30	N 86°38'58" W	108.50'	36"
30-31	N 86°38'58" W	31.00'	36"	
31-32	N 86°38'58" W	18.25'	36"	
32-33	N 86°38'58" E	112.25'	36"	
33-34	N 03°00'13" E	58.00'	30"	
33-35	N 86°38'58" W	160.66'	30"	
35-36	N 00°47'21" W	60.16'	24"	
36-37	N 00°38'10" E	105.14'	24"	
29-38	S 03°21'02" W	29.50'	12"	
38-39	S 03°21'02" W	31.00'	12"	
32-40	N 03°28'23" E	352.00'	15"	
32-41	S 20°45'23" W	30.92'	12"	
41-42	S 03°21'02" W	31.00'	12"	
35-43	S 01°21'16" W	45.28'	12"	
43-44	S 16°28'58" E	31.00'	12"	
36-45	N 86°38'58" W	122.47'	12"	
1	Ex 4-46	S 86°02'09" E	20.00'	24"
	46-47	N 32°55'01" E	58.00'	18"
	47-EW1	N 32°55'01" E	37.48'	12"
	Ex 2-48	N 8°44'59" E	128.25'	18"
	48-HW2	N 81°22'59" E	52.71'	12"

* Horizontal Reference Datum = NAD 83 (1986 Adj.) (Ohio South Zone)

PROJECT NAME

STORM SURVEY COORDINATE DATA

CALCULATED
CHECKED

HORIZ.
SCALE



STREET NAME 1					
See Sheet 48		AS-BUILT			
REF	ITEM	STATION	NORTHING	EASTING	ELEVATION
1	16"x12" Tapping Sleeve	133+39.09			
2	12" Water Main Valve	133+39.00			
3	12" 22.5' Bend (Horiz)	133+44.72			
4	3/4" WS (Short) (ADDRESS)	134+30.00	*	*	*
5	Grade Break Use Joint Defl (Vert)	134+70.00			
6	Grade Break Use Joint Defl (Vert)	135+00.00			
7	3/4" WS (Long) (ADDRESS)	135+23.00			
See Sheet 49					
STREET NAME 1					
2	3/4" WS (Short) (ADDRESS)	135+38.00			
3	3/4" WS (Long) (ADDRESS)	135+57.00			
4	12"x6" Anchor Tee	135+70.00			
5	6" Fire Hydrant Valve	135+70.00			
6	Fire Hydrant	135+75.60			
7	3/4" WS (Long) (ADDRESS)	135+95.00			
8	12" 22.5' Bend (Horiz)	135+99.14			
9	1" WS (Short) (ADDRESS)	136+20.00			
	3/4" WS (Long) (ADDRESS)	136+28.00			
10	1" WS (Short) (ADDRESS)	136+58.00			
11	3/4" WS (Long) (ADDRESS)	136+68.00			
12	3/4" WS (Short) (ADDRESS)	136+85.00			
See Sheet 50					
STREET NAME 1					
1	3/4" WS (Long) (ADDRESS)	137+34.00			
2	12"x8" Tee	137+66.16			
3	12" 45' Bend (Vert)	137+71.35			
4	12" 45' Bend (Vert)	137+75.00			
5	12" 45' Bend (Vert)	137+85.38			
6	12" 45' Bend (Vert)	137+90.00			
7	3/4" WS (Long) (ADDRESS)	137+99.00			
8	12" Water Main Valve w/ Cols. Std HD Valve Box	138+04.32			
9	3/4" WS (Long) (ADDRESS)	138+21.00			
10	3/4" WS (Short) (ADDRESS)	138+83.00			
11	3/4" ARO w/ Ferrule Box	138+95.00			
12	12" 22.5' Bend (Vert)	139+00.00			
13	12" 22.5' Bend (Vert)	139+05.00			
14	12" 22.5' Bend (Vert)	139+10.14			
15	12" 22.5' Bend (Vert)	139+15.00			
See Sheet 51					
STREET NAME 1					
1	3/4" WS (Short) (ADDRESS)	139+37.00			
2	12"x6" Anchor Tee	139+88.00			
3	6" Fire Hydrant Valve	139+88.00			
4	Fire Hydrant	139+93.00			
5	Horiz Bend Use Joint Defl	140+29.56			
6	12" 45' Bend (Vert)	140+50.42			
7	12" 45' Bend (Vert)	140+57.28			
8	12" 45' Bend (Vert)	141+00.00			
9	12" 45' Bend (Vert)	141+03.63			
10	12" 45' Bend (Vert)	141+09.32			
11	12" 45' Bend (Vert)	141+15.00			
12	3/4" ARO w/ Ferrule Box	141+20.00			
See Sheet 52					
STREET NAME 1					
1	12" 11.25' Bend (Vert)	142+12.27			
2	12"x8" Tee	142+17.55			
3	2" WS (Long) (ADDRESS)	142+21.00			
4	12" 11.25' Bend (vert)	142+46.46			
5	12" 45' Bend (Vert)	142+61.30			
6	12" 45' Bend (Vert)	142+65.00			
7	12" Water Main Valve w/ Cols. Std HD Valve Box	142+74.09			
See Sheet 55					
STREET NAME 1					
1	12" 22.5' Bend (Vert)	147+27.50			
2	12" 22.5' Bend (Vert)	147+32.67			
3	3/4" WS (Long) (ADDRESS)	147+73.00			
4	3/4" WS (Short) (ADDRESS)	147+76.00			
5	3/4" WS (Long) (ADDRESS)	147+87.00			
6	12" 22.5' Bend (Vert)	147+98.73			
7	12" 22.5' Bend (Vert)	148+02.50			
8	12" 22.5' Bend (Vert)	148+07.50			
9	12" 22.5' Bend (Vert)	148+12.50			

STREET NAME 2					
See Sheet 98		AS-BUILT			
REF	ITEM	STATION	NORTHING	EASTING	ELEVATION
1	3/4" WS (Short) (ADDRESS)	126+78.00			
2	12" 22.5' Bend (Vert)	126+78.32			
3	12" 22.5' Bend (Vert)	126+83.50			
4	12" 22.5' Bend (Vert)	126+88.50			
5	12" 22.5' Bend (Vert)	126+94.46			
6	3/4" WS (Short) (ADDRESS)	127+19.00			
See Sheet 56					
STREET NAME 2					
1	Grade Break Use Joint Defl (Vert)	128+21.01			
2	3/4" WS (Long) (ADDRESS)	128+62.00			
3	12" Water Main Valve w/ Cols. Std HD Valve Box	128+68.00			
4	12" 11.25' Bend (Vert)	128+73.00			
5	12" 11.25' Bend (Vert)	128+78.53			
6	12" 11.25' Bend (Vert)	128+89.52			
7	12" 11.25' Bend (Vert)	128+94.80			
8	12" 11.25' Bend (Horiz)	129+04.88			
9	8" Water Main Valve w/ Cols. Std HD Valve Box	129+30.77			
10	12" 22.5' Bend (Vert)	129+75.00			
11	3/4" WS (Long) (ADDRESS)	129+80.00			
12	12" 22.5' Bend (Vert)	129+82.48			
13	12" 22.5' Bend (Vert)	129+87.48			
14	12" 22.5' Bend (Vert)	129+95.00			
See Sheet 100					
STREET NAME 3					
1	3/4" WS (Short) (ADDRESS)	30+50.00			
2	2" WS (Long) (ADDRESS)	30+68.00			
3	8" Water Main Valve w/ Cols. Std HD Valve Box	30+90.00			
4	12" 45' Bend (Horiz)	31+00.00			
5	12" 45' Bend (Horiz)	31+13.18			
See Sheet 50					
STREET NAME 4					
1	8" Water Main Valve w/ Cols. Std HD Valve Box	0+23.50			
2	8" 45' Bend (Horiz)	0+35.90			
3	8"x6" Reducer	0+38.73			
4	6" 45' Bend (Horiz)	0+40.90			

Horizontal Reference Datum = NAD 83 (NSRS 2007) (Ohio South Zone)

LEGEND

ARO	Air Release Outlet
WS	Water Service
HD	Heavy Duty
Horiz	Horizontal
Vert	Vertical
Defl	Deflection

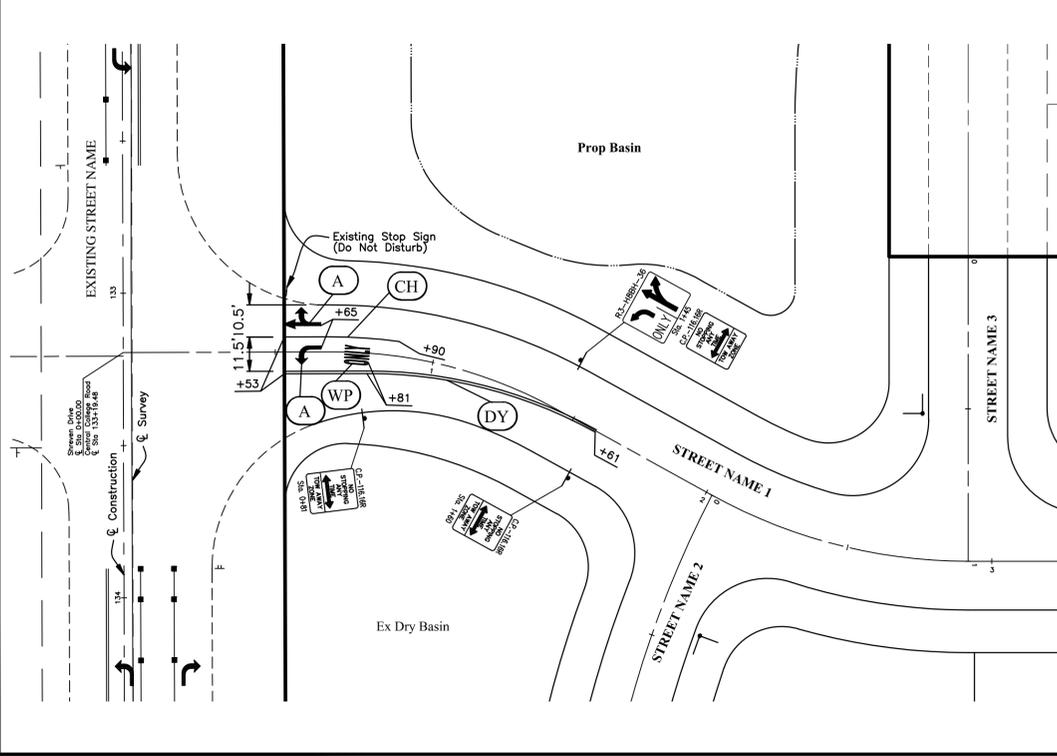
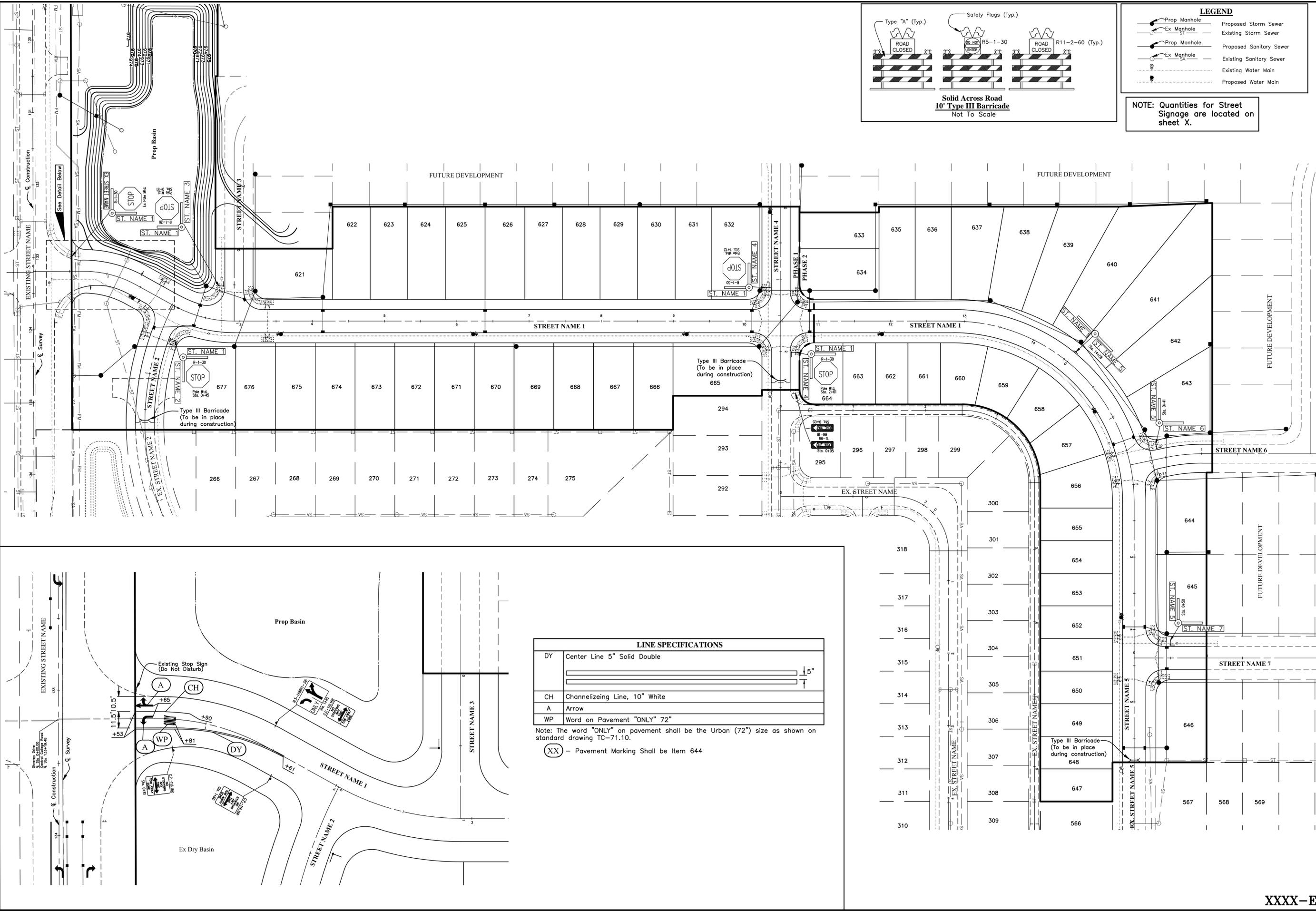
* NOTE: PROVIDE COORDINATES AND ELEVATIONS OF WATER SERVICES AT THE CURB STOP.

CALCULATED
ABC
CHECKED
ABC

WATERLINE
SURVEY COORDINATE DATA

PROJECT NAME

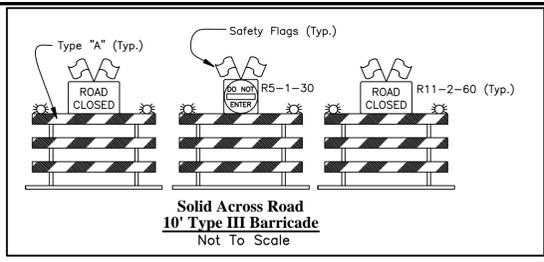




LINE SPECIFICATIONS	
DY	Center Line 5" Solid Double
CH	Channelizing Line, 10" White
A	Arrow
WP	Word on Pavement "ONLY" 72"

Note: The word "ONLY" on pavement shall be the Urban (72") size as shown on standard drawing TC-71.10.

(XX) - Pavement Marking Shall be Item 644



LEGEND

- Prop Manhole
- Ex Manhole
- Prop Manhole
- Ex Manhole
- Prop Storm Sewer
- Existing Storm Sewer
- Prop Sanitary Sewer
- Existing Sanitary Sewer
- Existing Water Main
- Proposed Water Main

NOTE: Quantities for Street Signage are located on sheet X.

PAVEMENT MARKING AND SIGNING

PROJECT NAME

XXXX-E

CALCULATED
CHECKED

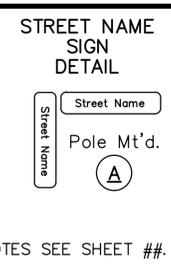
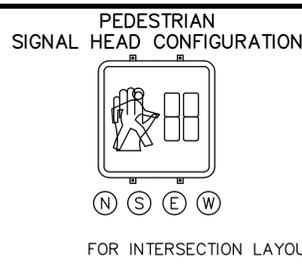
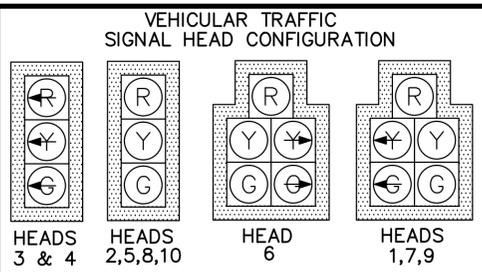
HORIZ. SCALE
0 30 60

Street A at Street C	Street A at Street B	ITEM NO.	ESTIMATED QUANTITY	UNIT	DESCRIPTION *
					TRAFFIC SIGNAL
223	20	625	243	LF	Conduit, Concrete Encased, 2", 725.051
133	159	625	292	LF	Conduit, Concrete Encased, 3", 725.051
248	419	625	667	LF	Conduit, 2", 725.051
230	290	625	520	LF	Trench, 30" Deep
134	74	625	208	LF	Trench, 36" Deep
2	1	625	3	Each	Pull Box, 725.08, 27"
2		625	2	Each	Pull Box, 725.08, 32"
	3	625	3	Each	Pull Box, 725.06, 13"x24"
10	11	625	21	Each	Ground Rod
341	273	625	614	LF	No. 4 AWG, 600 Volt Distribution Cable, As Per Plan
3		625	3	Each	Bracket Arm, 25'
1		625	1	Each	Bracket Arm, 30'
1	1	630	2	Lump	Signing, Misc.: Traffic Signal Signs
4	4	630	8	Each	Sign Support Assembly, Pole Mounted, As Per Plan
	1	632	1	Each	Conduit Riser, 2" Diameter, 725.05, SCH 80
6	6	632	12	Each	Vehicular Signal Head, (LED), 3-Section, 12" Lens, 1-Way
2	4	632	6	Each	Vehicular Signal Head, (LED), 5-Section, 12" Lens, 1-Way
8	8	632	16	Each	Pedestrian Signal Head, (LED), (Countdown)
4	4	632	8	Each	Pedestrian Pushbutton
8	10	632	18	Each	Covering Of Vehicular Signal Head
8	8	632	16	Each	Covering Of Pedestrian Signal Head
4	4	632	8	Each	Covering Of Pedestrian Pushbutton
4		632	4	Each	Signal Support Foundation
4	6	632	10	Each	Pedestal Foundation
1		632	1	Each	Signalization Misc.: Sleeve For Anchor Base Foundation
	1	632	1	Each	Pedestal Support, 5', Transformer Base
4	5	632	9	Each	Pedestal Support, 10.7', Transformer Base
	1	632	1	Each	Pedestrian Pedestal, Relocated
4		632	4	Each	Combination Signal Support, Type 4120, Design 4
	3	632	3	Each	Strain Pole, Type 4170, Design 8
	3	632	3	Each	Strain Pole Foundation
1	1	632	2	Each	Removal Of Traffic Signal Installation, As Per Plan
1268	948	632	2216	LF	Signal Cable, 7-Conductor, No. 14, Awg
207	804	632	1011	LF	Signal Cable, 9-Conductor, No. 14, Awg
	310	632	310	LF	Messenger Wire, 7 Strand, 3/8" Diameter with Accessories
537	2982	632	3519	LF	Loop Detector Lead-In Cable
	5	632	5	Each	Detector Loop
34	68	632	102	LF	Power Cable, 2-Conductor, No. 6 AWG
	123	632	123	LF	Service Cable, 2-Conductor, No. 6 AWG
1		632	1	Each	Signalization, Misc.: Video Detection System
1	1	633	2	Each	Cabinet Foundation
1	1	633	2	Each	Controller Unit With Cabinet 8 PH, P44, Base Mounted
	1	633	1	Each	Controller Work Pad

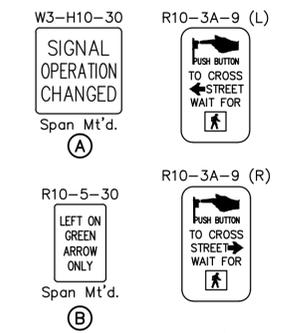
* - ITEM DESCRIPTIONS ARE SHOWN FOR EXAMPLE PURPOSES ONLY.
 ACTUAL ITEM DESCRIPTIONS USED WILL VARY BY PROJECT

None
CALCULATED SCALE XXX CHECKED XXX
TRAFFIC SIGNAL INSTALLATION GENERAL SUMMARY
PROJECT NAME

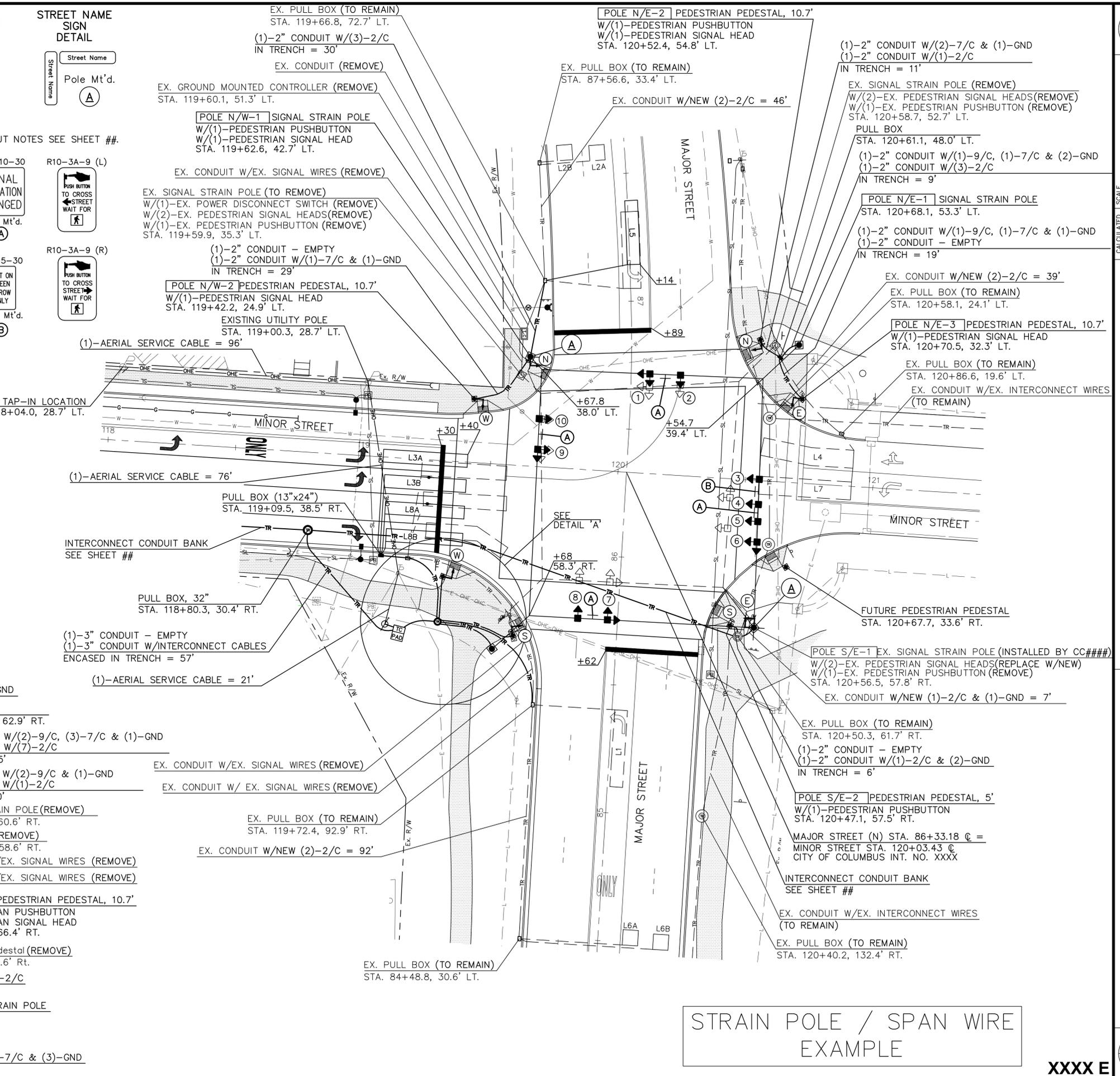
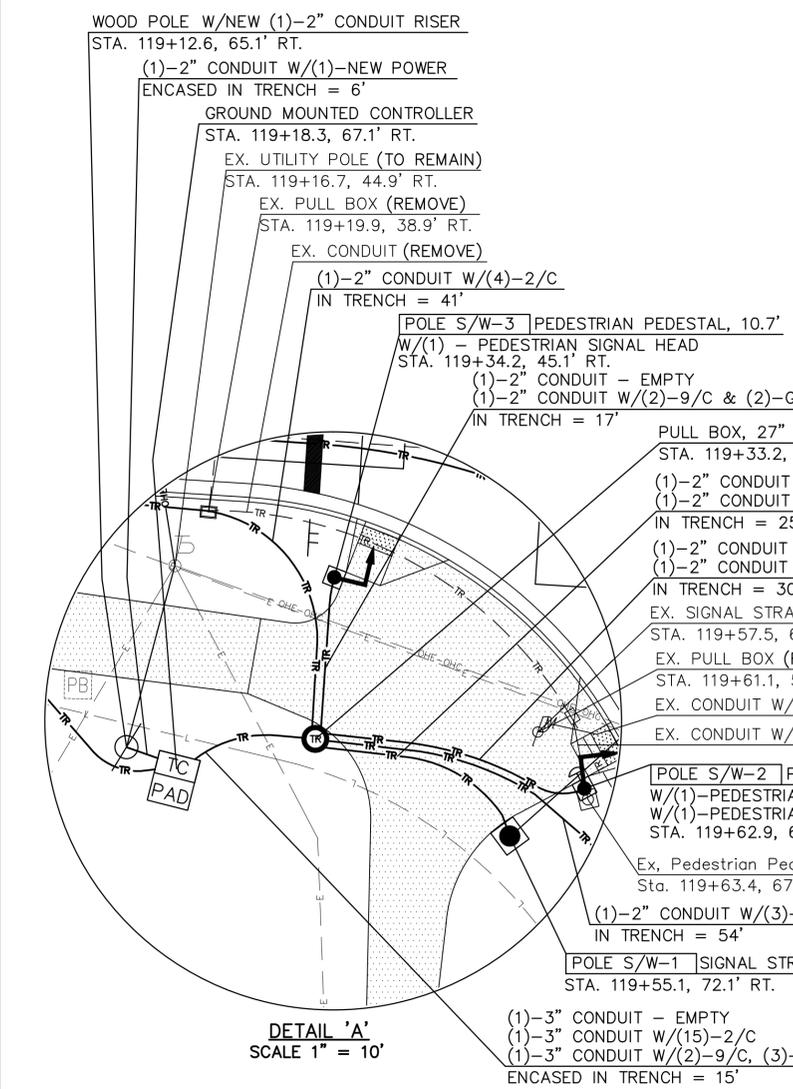




- LEGEND**
- SIGNAL HEADS: PROP. VEHICULAR [Symbol] EX. VEHICULAR [Symbol]
 PROP. PEDESTRIAN [Symbol] EX. PEDESTRIAN [Symbol]
- SIGNAL POLES: PROP. ANCHOR/STRAIN POLE [Symbol] EX. ANCHOR/STRAIN POLE [Symbol]
 EX. EMBEDDED POLE [Symbol] EX. WOOD POLE [Symbol] GUY ANCHOR [Symbol]
 PROP. PEDESTAL [Symbol] EX. PEDESTAL [Symbol] PUSHBUTTON [Symbol]
 EX. MASTARM [Symbol]
 PROP. MASTARM [Symbol]
- CONTROLLERS & CABINETS: EX. CABINET W/PAD [Symbol] PROP. CABINET W/PAD [Symbol]
 EX. CABINET (NO PAD) [Symbol] PROP. CABINET (NO PAD) [Symbol]
- PULL BOXES: EX. PULL BOX [Symbol] PROP. PULL BOX [Symbol]
- DETECTION: FLOW MONITOR [Symbol] MICROWAVE [Symbol] RADAR [Symbol]
 VIDEO CAMERA [Symbol] VIDEO ZONE [Symbol]
 LOOP DETECTOR [Symbol]
- MISCELLANEOUS: REDLIGHT CAMERA [Symbol] REDLIGHT FLASH [Symbol]



FOR INTERSECTION LAYOUT NOTES SEE SHEET ##.



STRAIN POLE / SPAN WIRE
 EXAMPLE

FIELD WIRING HOOK-UP CHART

SIGNAL HEAD #	INDICATION	FIELD TERMINAL	FLASH
1 (NBLT)	R	06 R	Y
	Y	06 Y	
	G	06 G	
	W	01 W	
2 (NB)	R	06 R	Y
	Y	06 Y	
3 (EBLT)	R	03 R	R
	Y	03 Y	
4 (EBLT)	R	03 R	R
	Y	03 Y	
5 (EB)	R	08 R	R
	Y	08 Y	
6 (EBRT)	R	08 R	R
	Y	08 Y	
	G	08 G	
	W	01 W	
7 (SBLT)	R	02 R	Y
	Y	02 Y	
	G	02 G	
	W	05 W	
8 (SB)	R	02 R	Y
	Y	02 Y	
9 (WBLT)	R	04 R	R
	Y	04 Y	
	G	04 G	
	W	07 W	
10 (WB)	R	04 R	R
	Y	04 Y	
N	WALK	G 04-W	OFF
	DON'T WALK	R 04-DW	
S	WALK	G 08-W	OFF
	DON'T WALK	R 08-DW	
E	WALK	G 06-W	OFF
	DON'T WALK	R 06-DW	
W	WALK	G 02-W	OFF
	DON'T WALK	R 02-DW	

TIMING CHART

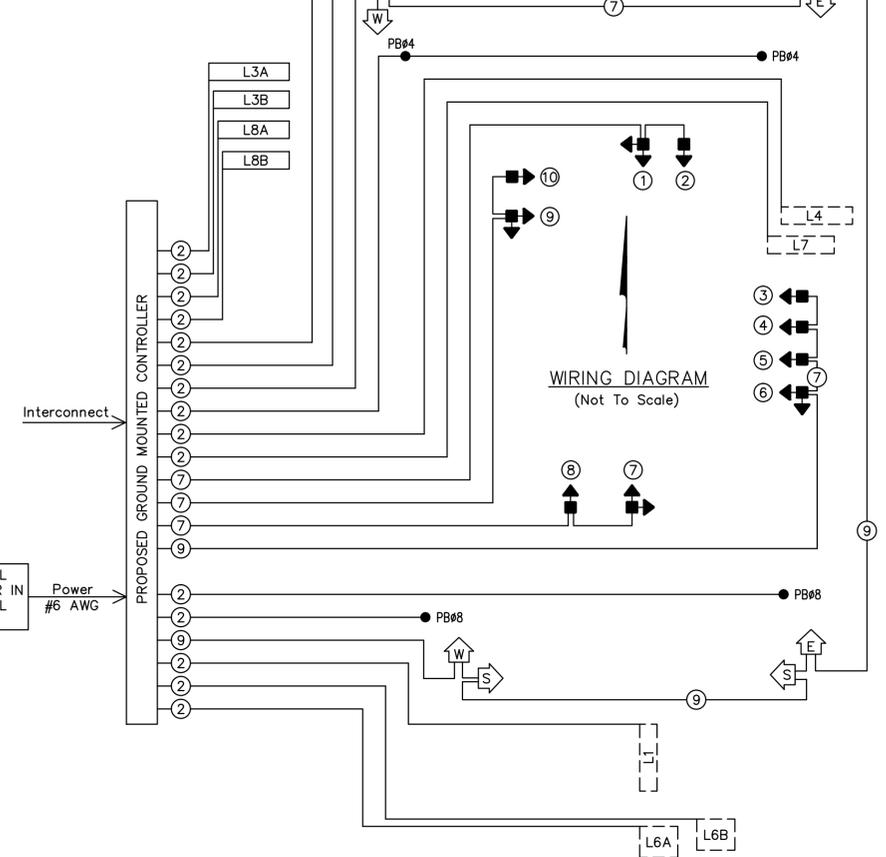
PHASE	01	02	03	04	05	06	07	08
MOVEMENT	NBLT	SB	EBLT	WB	SBLT	NB	WBLT	EB
MIN INITIAL	8	23	8	10	8	23	8	10
WALK	0	7	0	7	0	7	0	7
PED CLR	0	17	0	22	0	17	0	22
PASS / EXT	3.7	2.5	3.7	3.7	3.7	2.5	3.7	3.7
YELLOW	3.0	3.9	3.0	3.6	3.0	3.9	3.0	3.6
RED CLR	3.7	1.8	4.2	2.4	3.3	1.8	3.5	2.4
MAX GRN 1	30	50	25	50	30	50	25	50
MAX GRN 2	30	50	25	50	30	50	25	50
PED RECALL	OFF	ON	OFF	OFF	OFF	ON	OFF	OFF
VEH RECALL	OFF	MIN	OFF	OFF	OFF	MIN	OFF	OFF
MEMORY	OFF	ON	OFF	OFF	OFF	ON	OFF	OFF

DETECTOR ASSIGNMENTS

DET (#)	DETECTOR ASSIGNMENT		PHASE	LOOP SIZE (W x L)	LOOP DELAY DATA		DET UNIT RACK & CABLE LABEL
	UNIT (#)	CHANNEL (#)			DELAY IN SECONDS	INHIBIT DELAY DURING GRN	
L6A	1	1	06	Existing	-	-	NB (L)
L6B	1	2	06	Existing	-	-	NB (R)
L1	2	1	01	Existing	3	01	NBLT
L5	2	2	05	6'x25'	3	05	SBLT
L2A	3	1	02	Existing	-	-	SB (L)
L2B	3	2	02	Existing	-	-	SB (R)
L3A	4	1	03	5'x33'	3	03	EBLT (L)
L3B	4	2	03	5'x32'	-	03	EBLT (R)
L8A	5	1	08	5.5'x31'	-	08	EB
L8B	5	2	08	5'x30'	12	08	EBRT
L4	6	1	04	Existing	-	04	WB
L7	6	2	07	Existing	3	07	WBLT

WIRING DIAGRAM LEGEND

- L-X Detector Loop
- Proposed Vehicular Signal Head
- Pedestrian Signal Head
- PB Pedestrian Pushbutton



ITEM 632 REMOVAL OF TRAFFIC EXISTING SIGNAL INSTALLATION, AS PER PLAN

QUANTITY	REMOVED ITEM DESCRIPTION	DELIVERED TO 1820 E 17th AV	DISPOSED OF BY PROJECT
2	TRAFFIC PULL BOX	X	
4	PEDESTRIAN PUSHBUTTON	X	
1	SIGNAL WIRES (LUMP SUM)		X
4	FOUNDATIONS		X
1	SIGNAL CONDUIT (LUMP SUM)		X
1	CONTROLLER	X	
1	SPAN WIRE (LUMP SUM)		X
8	PEDESTRIAN SIGNAL HEAD	X	
8	SIGNAL HEADS	X	
1	POWER SERVICE		X
3	SIGNAL POLES	X	
1	PEDESTAL	X	

NOTES:

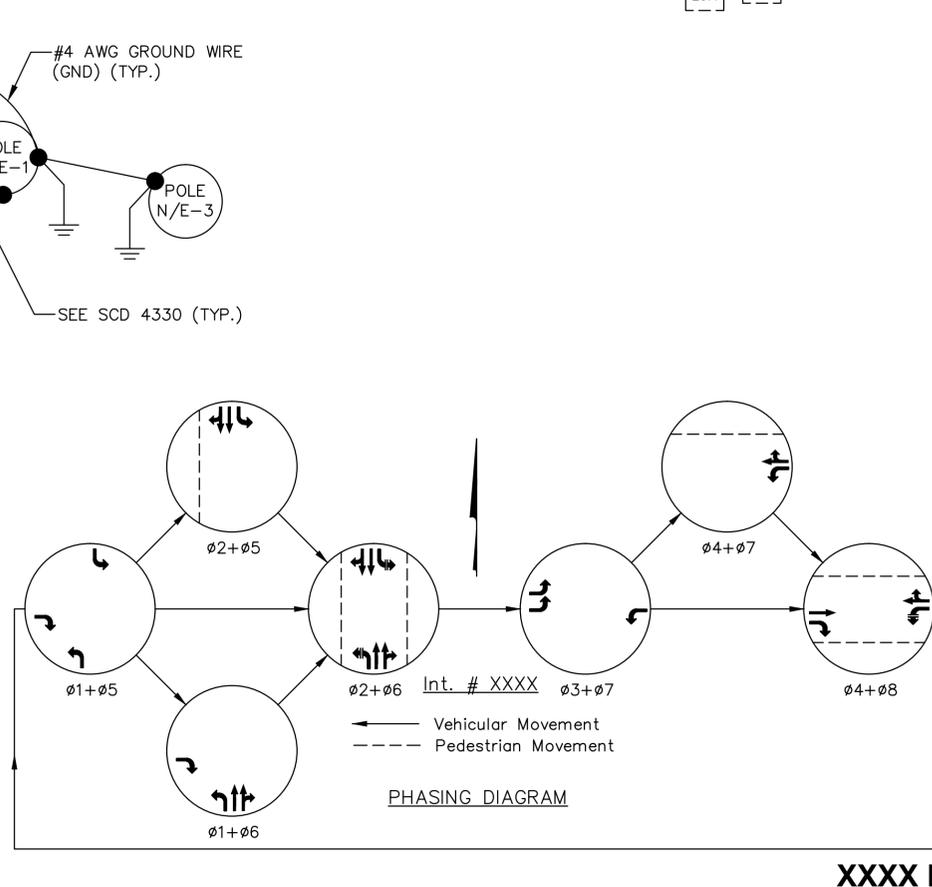
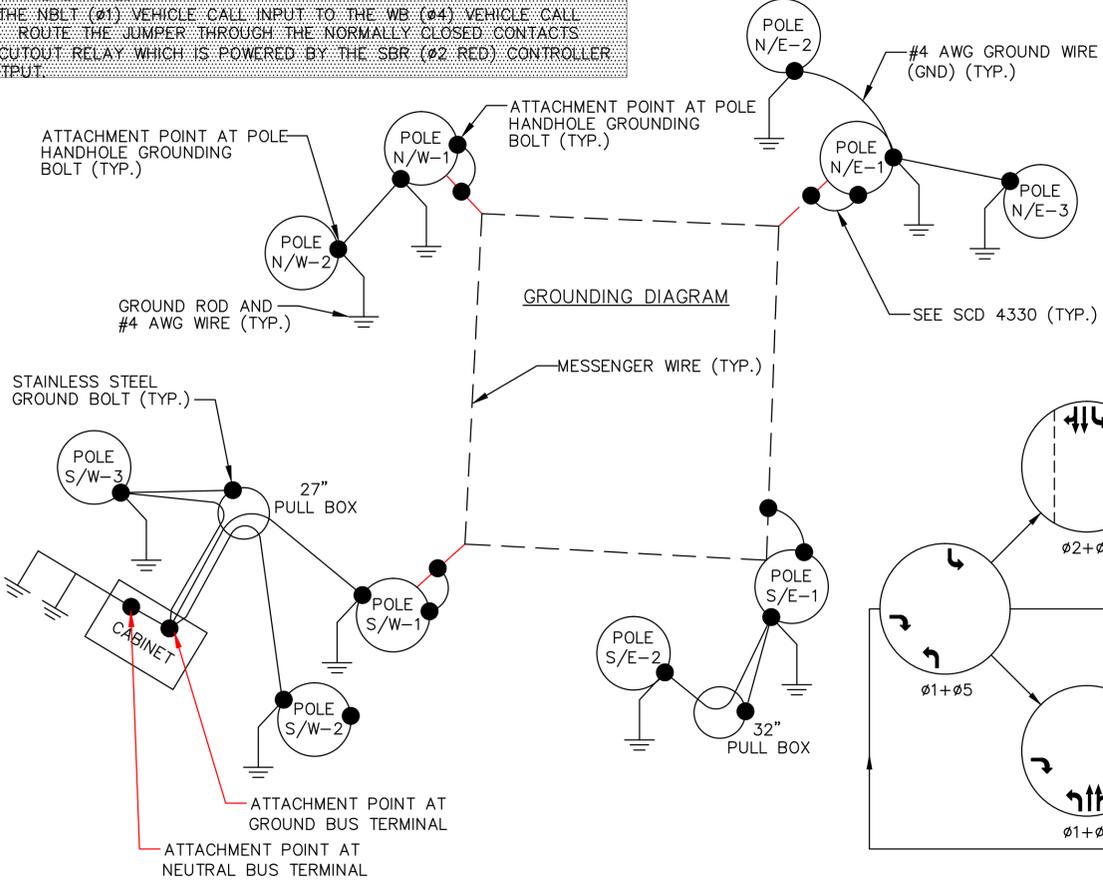
- SET CONFLICT MONITOR FOR 10 SEC FLASH.
- LOOP DETECTOR LEAD-IN CABLE SHALL BE USED FOR THE PEDESTRIAN PUSHBUTTONS. GROUND THE SHIELD ONLY AT THE CABINET. SET ALL PRESENCE LOOP CHANNELS TO COUNT MODE.
- SET ALL 6'x6' LOOP CHANNELS TO PULSE MODE.
- ALL LOOP SPADE TERMINALS SHALL HAVE THE LOOP HOMERUN WIRE SOLDERED TO THE SPADE TERMINAL. THE LOOP HOMERUN WIRES SHALL BE TWISTED TOGETHER AS CLOSE TO THE SPADE TERMINAL SCREWS AS POSSIBLE. THE GROUNDING POINT SHALL BE THE CLOSEST BACK PANEL WIRE.
- HARD WIRE DETECTOR GROUND.
 - INSTALL A #1 'OMIT' THROUGH THE THRU.
 - INSTALL A #1 'OMIT' INP THROUGH.
 - USE DIODES.
 - INSTALL DIGI #7 AND #.
- INITIALIZE IN.
 - ENABLE DUAL ENTRY. ACTIVATE 04 & 08.
 - ENABLE SIMULTANEOUS GAP OUT. ACTIVATE 02, 04, 06 & 08.
- INTERCONNECT FEEDER CABLE SHALL BE CONTINUOUSLY RUN BETWEEN THE CONTROLLER CABINET AND THE COAX DEVICE. NO SPLICES ARE PERMITTED EXCEPT WHERE NOTED.
- JUMPER THE NBLT (01) VEHICLE CALL INPUT TO THE WB (04) VEHICLE CALL INPUT. ROUTE THE JUMPER THROUGH THE NORMALLY CLOSED CONTACTS OF A CUTOUT RELAY WHICH IS POWERED BY THE SBR (02 RED) CONTROLLER DC OUTPUT.

PLAN SHEET NOTES ARE ISSUED BY THE CITY OF COLUMBUS. ONLY USE NOTES APPLICABLE TO THE PROJECT.

INTERSECTION LAYOUT NOTES:

- The Contractor shall ensure that all sidewalks/pathways meet ADA guidelines per City specifications.
- Power service and interconnect cable shall be continuous with no splices except as noted.
- For signing and pavement markings, see sheet(s) XX-XX.
- Center all loops in the center of their lane unless specified otherwise. Install loops after the asphalt surface course is laid.
- The top of the pole base foundation shall be edged using a 1/2" sidewalk edger instead of being chamfered.
- The Transportation Division Personnel shall approve bolt alignment, pole foundation location and elevation prior to the Contractor installing the foundation.
- Tagging of cable in the certain cable as directed.
- The pedestrian signal head (ramp) that is opposite a it.
- Do not encase the groud foundation. Full access of concrete, if visible, wi.
- Any signal support base of the sidewalk.
- The Contractor shall not.
- Underground conduit and prior to the placement o
- The Contractor shall pro the designated power soi shall not be bundled with
- See interconnect schema
- For continuation of conduit, see sheet(s) XX.
- Use a separate conduit for each grouping of cables unless otherwise indicated: one conduit for 120VAC signal cable (5C, 7C, 9C); one conduit for power; one conduit for 2 conductor cable (loop & pushbutton); and one conduit for interconnect cable (twisted pair, fiber optics or coax). Any other low voltage cable not specified above can be placed in the 2 conductor cable conduit. Power cable must be in its own conduit.
- Unless otherwise specified the following shall apply. A preformed PVC conduit elbow shall be used to change the PVC conduit direction beyond what its natural bending flex would yield. Rigid metal conduit can be bent to form an elbow or any other bending angle required only if a proper conduit bending machine is used. The elbow radius for any non-interconnect conduit shall be 24" or larger when used in a horizontal or vertical manner. Any type of elbow used for interconnect conduit shall have a radius of 36" or larger when used in a horizontal direction or in a vertical direction when the trench is 36" or deeper. If the trench is less than 36" then the vertical elbow radius shall be 24".
- All clamps and banding material shall be painted to match the signal supports.

PLAN SHEET NOTES ARE ISSUED BY THE CITY OF COLUMBUS. ONLY USE NOTES APPLICABLE TO THE PROJECT.



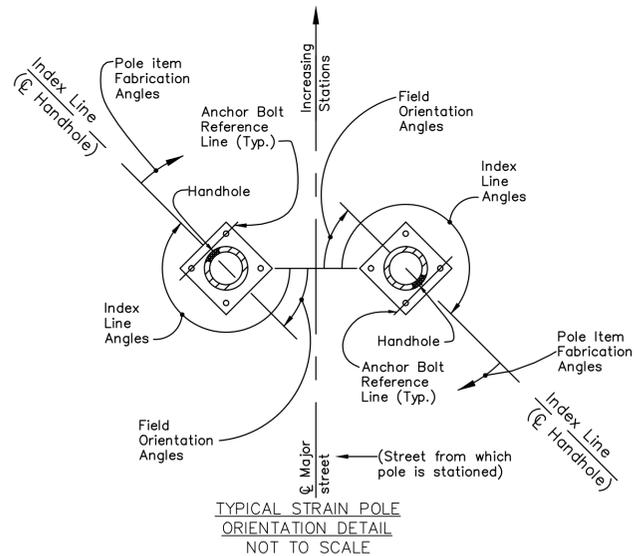
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TRAFFIC SIGNAL DETAILS
STREET A AT STREET B

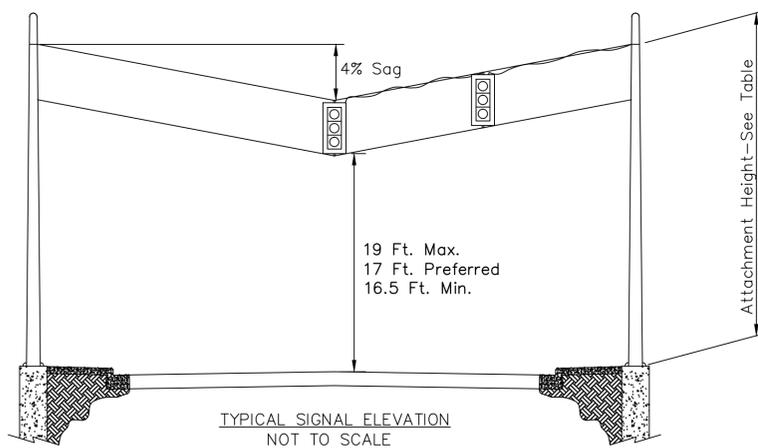
PROJECT NAME

XXXX E

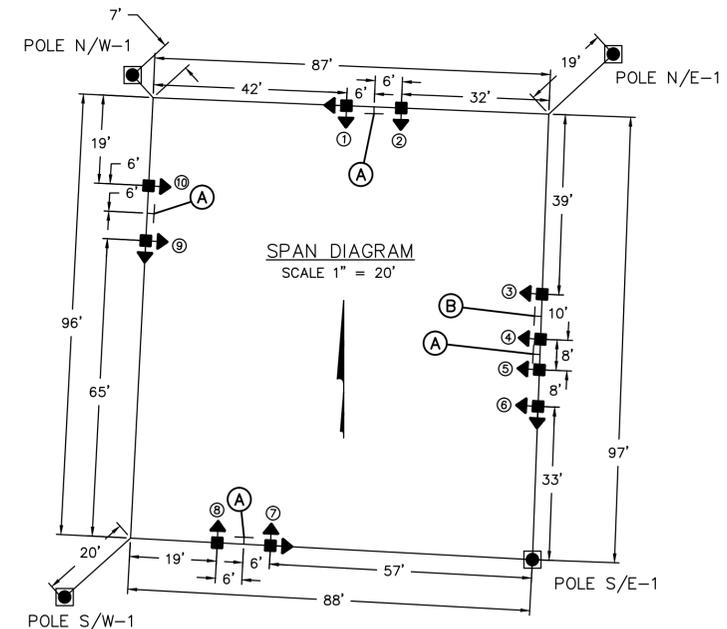
INTERSECTION	SHEET NO.	POLE SIZES & SPAN ATTACHMENT HEIGHT					POLE FABRICATION DATA CLOCKWISE FROM HANDHOLE AT 0 DEGREES						FIELD ORIENTATION			
		POLE DESIGNATION	POLE COLOR	POLE DESIGN NO.	POLE HT. (FT.)	ATTACHMENT HT. (FT.) SPAN @ HT. (FT.)	ANCHOR BOLT REF. LINE	2" BHC ANGLE-HT. DEG.-FT.	3" BHC ANGLE-HT. DEG.-FT.	PED. SIGNALS	PED. PUSH BUTTON	STREET NAME SIGN	INDEX LINE ANGLE (HANDHOLE)	ANCHOR BOLT REF. LINE	CAPPED FOUNDATION CONDUIT ELL 2" DIA.	FOUNDATION ELEVATION
		S/W-1	Dark Bronze	8	32'	28.5'	90°	-	29' - 180°	-	-	-	225°	135°	225'	726.09
		S/W-2	Dark Bronze	PEDESTAL	10.7'	-	90°	-	-	203°	180°	-	148°	58°	-	726.09
		S/W-3	Dark Bronze	PEDESTAL	10.7'	-	90°	-	-	262°	-	-	198°	108°	-	725.95
STREET A AT STREET B	XXX	N/W-2	Dark Bronze	PEDESTAL	10.7'	-	90°	-	-	99°	-	-	171°	81°	-	726.16
		N/W-1	Dark Bronze	8	30'	27'	90°	28' - 180°	-	223°	251°	135°/225°	134°	44°	134'	725.45
		N/E-2	Dark Bronze	PEDESTAL	10.7'	-	90°	-	-	105°	90°	-	242°	152°	-	728.11
		N/E-1	Dark Bronze	8	32'	28.5'	90°	29' - 180°	-	-	-	-	224°	134°	134'	729.12
		N/E-3	Dark Bronze	PEDESTAL	10.7'	-	90°	-	-	240°	-	-	217°	127°	-	728.66
		S/E-1	Dark Bronze	EXISTING	EX.	26'	EX.	EX.	-	130°/226°	-	135°/225°	135°	EX.	-	728.99
		S/E-2	Dark Bronze	PEDESTAL	5'	-	90°	-	-	-	180°	-	203°	113°	-	727.53



NOTES:
All angles measured clockwise.
Index line goes through the center of the handhole.



NOTES:
1. The lowest signal head height in each direction shall be set at 16.5 feet minimum (17' preferred). Adjust the span accordingly.



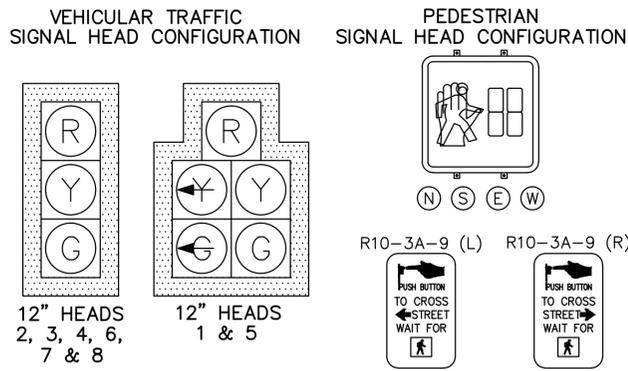
NOTES:
1. The lowest signal head height in each direction shall be set at 16.5 feet (17' Preferred). Adjust the span accordingly.
2. The dimensions shown on the span diagram are estimates. Final head positions shall be on the lane line, channel line or on the lane centerline. The distance between the heads are as indicated.

CALCULATED SCALE
XXX
CHECKED
XXX

POLE FABRICATION AND ORIENTATION DETAILS

PROJECT NAME

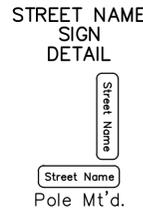
XX
XX



NOTES:

- The Contractor shall ensure that all sidewalks/pathways meet ADA guidelines per City specifications.
- Power, service and interconnect cable shall be continuous with no splices except as noted.
- For signing and pavement markings, see sheet(s) XX & XX.
- The top of the pole base foundation shall be edged using a 1/2" sidewalk edger instead of being chamfered.
- The Transportation Division Personnel shall approve bolt alignment, pole foundation location and elevation prior to the Contractor installing the foundation.
- Tagging of cable in the pullbox next to the control cabinet is not required except for tagging of certain cable as directed by the Project Engineer or as per plan.
- The pedestrian signal head shall be aimed at the centerline of the crosswalk area (not the curb ramp) that is opposite of the pedestrian signal head. The pedestrian signal heads shall also have a slight downward angle to it.
- Do not encase the ground rod, the grounding wire or the EMT conduit in concrete outside of their foundation. Full access to these items must be maintained at all times. Permanently mark the top of foundation concrete, if visible, with a marker or symbol so the rod location can be known by others.
- Any signal support base foundation within or adjacent to a sidewalk area shall be flush with the top of the sidewalk.
- The Contractor shall not install pole foundations until the pole location area is at finished grade.
- Underground sidewalk placement course. The Contractor shall be responsible for the placement of the sidewalk.
- The Contractor shall be responsible for the placement of the sidewalk.
- See interconnect schematic sheet(s) XXX for interconnect items.
- For continuation of conduit, see sheet(s) XXX and XXX.
- The control cabinet door shall be located on the south side of the cabinet.
- The top surface of a cabinet foundation located in sidewalk areas shall be 4" above the surrounding walk. Expansion material shall be used between all foundations and adjacent sidewalk.
- Use a separate conduit for each grouping of cables unless otherwise indicated: one conduit for 120VAC signal cable (5C, 7C, 9C, GND); one conduit for power; one conduit for 2 conductor cable (loop & pushbutton); and one conduit for interconnect cable (twisted pair, fiber optics or coax). Any other low voltage cable not specified above can be placed in the 2 conductor cable conduit. Power cable must be in its own conduit.
- Unless otherwise specified the following shall apply. A preformed PVC conduit elbow shall be used to change the PVC conduit direction beyond what its natural bending flex would yield. Rigid metal conduit can be bent to form an elbow or any other bending angle required only if a proper conduit bending machine is used. The elbow radius for any non-interconnect conduit shall be 24" or larger when used in a horizontal or vertical manner. Any type of elbow used for interconnect conduit shall have a radius of 36" or larger when used in a horizontal direction or in a vertical direction when the trench is 36" or deeper. If the trench is less than 36" then the vertical elbow radius shall be 24".
- All clamps and banding material shall be painted to match the signal supports.

PLAN SHEET NOTES ARE ISSUED BY THE CITY OF COLUMBUS. ONLY USE NOTES APPLICABLE TO THE PROJECT.



POLE N/W-2 PEDESTRIAN PEDESTAL, 10.7'
W/(1)-PEDESTRIAN SIGNAL HEAD
STA. 105+33.1, 45.4' LT.

(1)-2" CONDUIT W/(2)-7/C & (1)-VIDEO
(1)-2" CONDUITS - EMPTY
IN TRENCH = 13'

PULL BOX, 27"
STA. 105+30.0, 32.5' LT.

(1)-2" CONDUIT W/(1)-2/C & (1)-VIDEO
(1)-2" CONDUIT W/(2)-7/C, & (3)-GND
IN TRENCH = 20'

MAJOR STREET @ STA. 105+59.36 =
MINOR STREET @ STA. 37+56.65
CITY OF COLUMBUS INT. NO. = XXXX

POLE N/W-1 COMBINATION SIGNAL SUPPORT
W/(1)-PEDESTRIAN PUSHBUTTON
W/(1)-PEDESTRIAN SIGNAL HEAD
W/(1)-25' BRACKET ARM
W/(1)-VIDEO DETECTION CAMERA
STA. 105+11.3, 27.9' LT.

FOR CLARITY, VIDEO DETECTION BRACKET ARMS AND CAMERAS HAVE NOT BEEN SHOWN. SEE VIDEO DETECTION DETAIL.

(1)-2" CONDUIT W/(1)-2/C & (1)-VIDEO
(1)-2" CONDUIT W/(2)-7/C & (1)-GND
ENCASED IN TRENCH = 60'

POLE N/E-2 PEDESTRIAN PEDESTAL, 10.7'
W/(1)-PEDESTRIAN SIGNAL HEAD
STA. 105+85.8, 44.9' LT.

(1)-2" CONDUIT W/(2)-7/C & (2)-GND
(1)-2" CONDUIT - EMPTY
IN TRENCH = 12'

PULL BOX, 27"
STA. 105+90.2, 32.9' LT.

(1)-2" CONDUIT W/(2)-2/C & (2)-VIDEO
(1)-2" CONDUIT W/(1)-9/C, (2)-7/C & (1)-GND
ENCASED IN TRENCH = 67'

(1)-2" CONDUIT W/(1)-2/C & (1)-VIDEO
(1)-2" CONDUIT W/(1)-9/C, (2)-7/C, & (3)-GND
IN TRENCH = 20'

POLE N/E-1 COMBINATION SIGNAL SUPPORT
W/(1)-PEDESTRIAN PUSHBUTTON
W/(1)-PEDESTRIAN SIGNAL HEAD
W/(1)-30' BRACKET ARM
W/(1)-VIDEO DETECTION CAMERA
STA. 106+06.9, 24.9' LT.



(1)-2" CONDUIT W/(1)-2/C
(1)-2" CONDUIT W/(1)-7/C, & (3)-GND
IN TRENCH = 14'

PULL BOX, 32"
STA. 105+22.5, 35.9' RT.

(1)-2" CONDUIT W/(3)-7/C & (1)-GND
(1)-2" CONDUIT W/(1)-VIDEO
IN TRENCH = 15'

POLE S/W-1 COMBINATION SIGNAL SUPPORT
W/(1)-PEDESTRIAN SIGNAL HEAD
W/(1)-25' BRACKET ARM
W/(1)-VIDEO DETECTION CAMERA
STA. 105+30.1, 48.6' RT.

(1)-2" CONDUIT W/(2)-7/C, & (1)-GND
(1)-2" CONDUIT W/(1)-2/C & (1)-VIDEO
(1)-1.5" CONDUIT W/TRACING WIRE
(4)-3" CONDUITS (SEE INTERCONNECT PLAN)
ENCASED IN TRENCH = 68'

POLE S/E-2 PEDESTRIAN PEDESTAL, 10.7'
W/(1)-PEDESTRIAN SIGNAL HEAD
STA. 105+83.9, 49.8' RT.

(1)-2" CONDUIT - EMPTY
(1)-3" CONDUIT W/(3)-2/C & (4)-VIDEO
(1)-3" CONDUIT W/INTERCONNECT CABLES
(1)-3" CONDUIT W/(1)-9/C, (5)-7/C, & (2)-GND
ENCASED IN TRENCH = 22'

(1)-2" CONDUIT - EMPTY
(1)-2" CONDUIT W/(2)-7/C & (2)-GND
IN TRENCH = 15'

POLE S/E-1 COMBINATION SIGNAL SUPPORT
W/(1)-PEDESTRIAN PUSHBUTTON
W/(1)-PEDESTRIAN SIGNAL HEAD
W/(1)-25' BRACKET ARM
W/(1)-VIDEO DETECTION CAMERA
STA. 106+05.9, 30.9' RT.

(1)-2" CONDUIT W/(2)-2/C & (1)-VIDEO
(1)-2" CONDUIT W/(2)-9/C, (1)-7/C, & (3)-GND
IN TRENCH = 15'

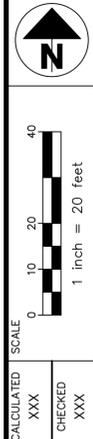
PULL BOX, 32"
STA. 105+90.4, 33.9' RT.

(1)-2" CONDUIT - EMPTY
(1)-2" CONDUIT W/(2)-7/C & (2)-GND
IN TRENCH = 15'

EX. POWER COMPANY PAD MOUNTED TRANSFORMER (PROP. POWER SOURCE)

(1)-2" CONDUIT W/(1)-POWER
ENCASED IN TRENCH = 14'

MAST ARM EXAMPLE



PROPOSED INTERCONNECT CONDUIT BANK
SEE INTERCONNECT PLAN SHEET XXX.

PROPOSED INTERCONNECT CONDUIT BANK
SEE INTERCONNECT PLAN SHEET XXX.

SEE CITY OF COLUMBUS, TRAFFIC SIGNAL DESIGN MANUAL, SECTION 2.1 FOR A COMPLETE TRAFFIC SIGNAL PLAN LEGEND.

LEGEND

- SIGNAL HEADS:**
- PROP. VEHICULAR [Symbol]
 - EX. VEHICULAR [Symbol]
 - PROP. PEDESTRIAN [Symbol]
 - EX. PEDESTRIAN [Symbol]
- SIGNAL POLES:**
- PROP. ANCHOR/STRAIN POLE [Symbol]
 - EX. ANCHOR/STRAIN POLE [Symbol]
 - EX. EMBEDDED POLE [Symbol]
 - EX. WOOD POLE [Symbol]
 - EX. GUY ANCHOR [Symbol]
 - PROP. PEDESTAL [Symbol]
 - EX. PEDESTAL [Symbol]
 - EX. PUSHBUTTON [Symbol]
 - EX. MASTARM [Symbol]
 - PROP. MASTARM [Symbol]
- CONTROLLERS & CABINETS:**
- EX. CABINET W/PAD [Symbol]
 - PROP. CABINET W/PAD [Symbol]
 - EX. CABINET (NO PAD) [Symbol]
 - PROP. CABINET (NO PAD) [Symbol]
- PULL BOXES:**
- EX. PULL BOX [Symbol]
 - PROP. PULL BOX [Symbol]
- DETECTION:**
- FLOW MONITOR [Symbol]
 - MICROWAVE [Symbol]
 - RADAR [Symbol]
 - VIDEO CAMERA [Symbol]
 - VIDEO ZONE [Symbol]
 - LOOP DETECTOR [Symbol]
- MISCELLANEOUS:**
- REDLIGHT CAMERA [Symbol]
 - REDLIGHT FLASH [Symbol]

FIELD WIRING HOOK-UP CHART

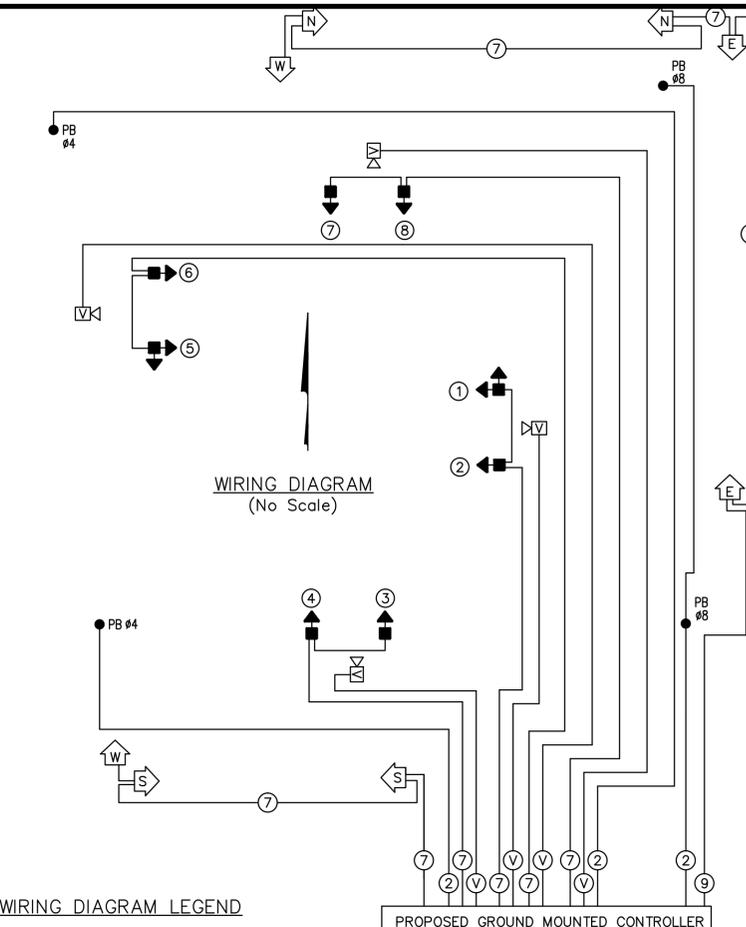
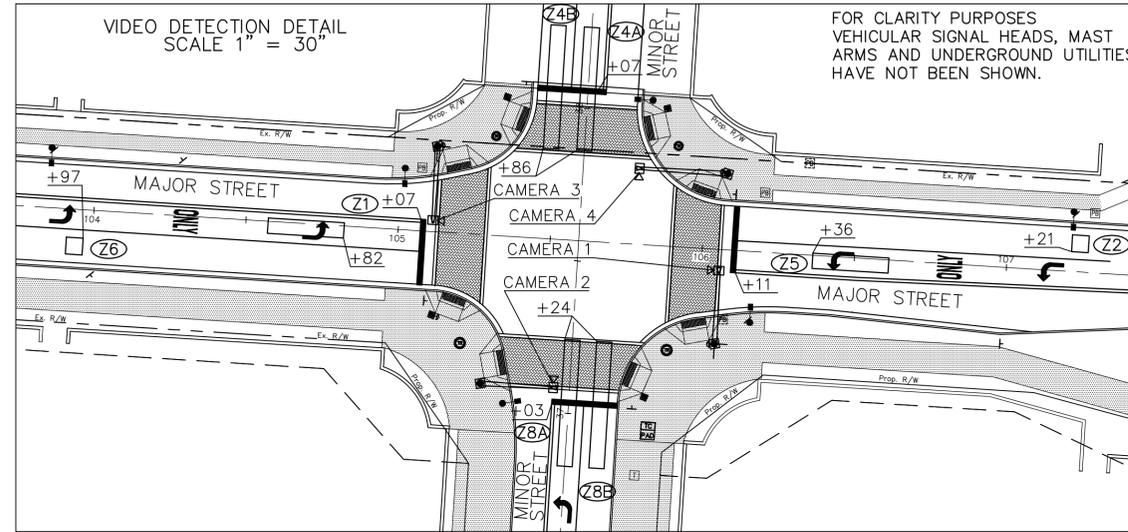
SIGNAL HEAD #	INDICATION	FIELD TERMINAL	FLASH
1 (EBLT)	R	Ø6 R	Y
	Y	Ø6 Y	
	G	Ø6 G	
	←	Ø1 Y	
2 (EB)	R	Ø6 R	Y
	Y	Ø6 Y	
	G	Ø6 G	
3 & 4 (SB)	R	Ø4 R	R
	Y	Ø4 Y	
	G	Ø4 G	
5 (WBLT)	R	Ø2 R	Y
	Y	Ø2 Y	
	G	Ø2 G	
	←	Ø5 Y	
6 (WB)	R	Ø2 R	Y
	Y	Ø2 Y	
	G	Ø2 G	
7 & 8 (NB)	R	Ø8 R	R
	Y	Ø8 Y	
	G	Ø8 G	
N	WALK	G Ø2-W	OFF
	DON'T WALK	R Ø2-DW	
S	WALK	G Ø6-W	OFF
	DON'T WALK	R Ø6-DW	
E	WALK	G Ø8-W	OFF
	DON'T WALK	R Ø8-DW	
W	WALK	G Ø4-W	OFF
	DON'T WALK	R Ø4-DW	

TIMING CHART

PHASE	Ø1	Ø2	Ø3	Ø4	Ø5	Ø6	Ø7	Ø8
MOVEMENT	EBLT	WB	NBLT	SB	WBLT	EB	SBLT	NB
MIN INITIAL	7	20	-	10	7	20	-	10
WALK	-	7	-	7	-	7	-	7
PED CLR	-	10	-	11	-	11	-	11
PASS / EXT	3.7	3.7	-	3.7	3.7	3.7	-	3.7
YELLOW	3.0	3.6	-	3.0	3.0	3.6	-	3.0
RED CLR	2.7	1.7	-	2.8	2.7	1.7	-	2.9
MAX GRN 1	15	40	-	20	15	40	-	20
MAX GRN 2	15	40	-	20	15	40	-	20
PED RECALL	OFF	ON	-	OFF	OFF	ON	-	OFF
VEH RECALL	OFF	ON	-	OFF	OFF	ON	-	OFF
MEMORY	OFF	ON	-	OFF	OFF	ON	-	OFF

VIDEO DETECTION ASSIGNMENTS

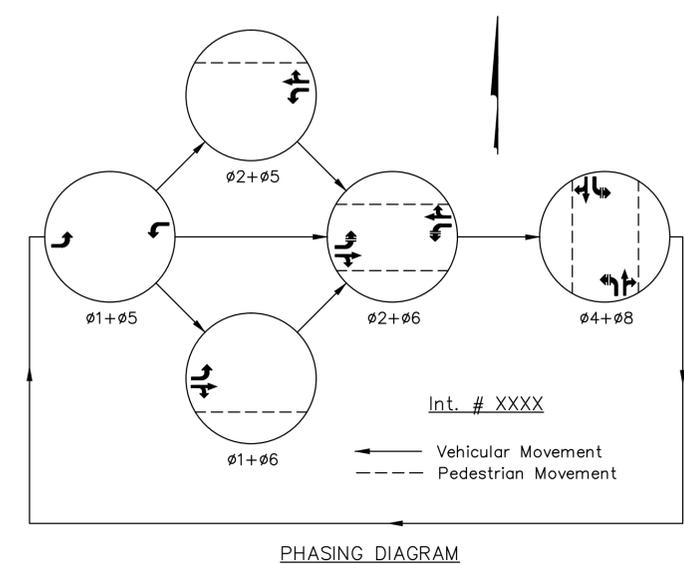
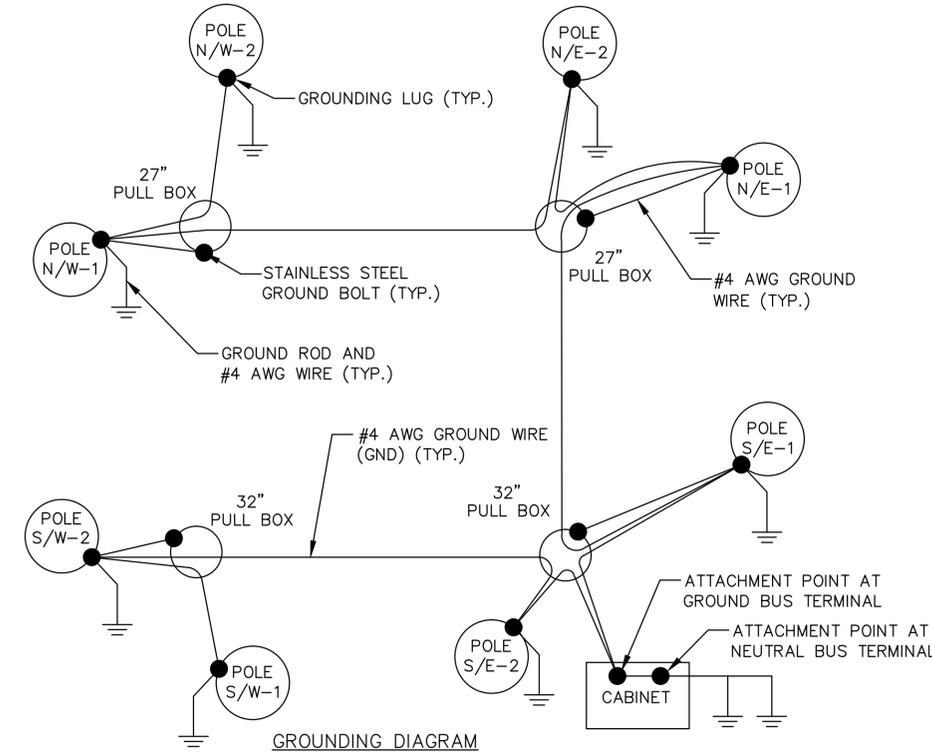
DETECTOR	CAMERA	PHASE	SIZE	PULSE	PRESENCE	LOOP DELAY DATA	
						DELAY (SEC.)	INHIBIT DELAY DURING GREEN Ø
Z1	1	Ø1	5'x25'		X	3	Ø1
Z2	3	Ø2	5.5'x5.5'	X		-	-
Z4A	2	Ø4	5'x40'		X	3	Ø4
Z4B	2	Ø4	5.5'x40'		X	8	Ø4
Z5	3	Ø5	5'x25'		X	3	Ø5
Z6	1	Ø6	5.5'x5.5'	X		-	-
Z8A	4	Ø8	5'x40'		X	3	Ø8
Z8B	4	Ø8	5.5'x40'		X	8	Ø8



WIRING DIAGRAM LEGEND

- Vehicular Signal Head
 - Pedestrian Signal Head
 - Pedestrian Pushbutton
 - Video Detection Camera
 - Video Detection Cable
 - Proposed Power Source
- 6P— 2/C #6 AWG

- NOTES:
- SET CONFLICT MONITOR FOR 10 SEC FLASH.
 - LOOP DETECTOR LEAD-IN CABLE SHALL BE USED FOR THE PEDESTRIAN PUSHBUTTONS. GROUND THE SHIELD ONLY AT THE CABINET.
 - BACK PANEL WIRING (FRONT SIDE JUMPERS ONLY):
 - A) HARD WIRE "PED RECYCLE" AND "REST-IN-WALK" TO GROUND. HOOK THE WTS AS INDICATED.
 - B) INS PLAN SHEET NOTES ARE ISSUED BY THE CITY OF COLUMBUS. ONLY USE NOTES APPLICABLE TO THE PROJECT.
 - C) INS OUTPUT AND Ø5 OMITTED DURING THE
 - D) USE DIODES TO PREVENT FEEDBACK ON MULTI-USE TERMINALS.
 - CONTROLLER SOFTWARE PROGRAMMING
 - A) INITIALIZE IN Ø2 & Ø6 GREEN
 - B) ENABLE DUAL ENTRY ACTIVATE Ø4 & Ø8
 - C) ENABLE SIMULTANEOUS GAP OUT. ACTIVATE Ø2, Ø4, Ø6 & Ø8.



CALCULATED SCALE

XXX

CHECKED

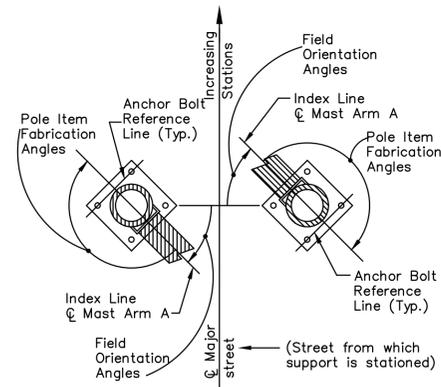
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TRAFFIC SIGNAL DETAILS
STREET A AT STREET C

PROJECT NAME

XXXX E

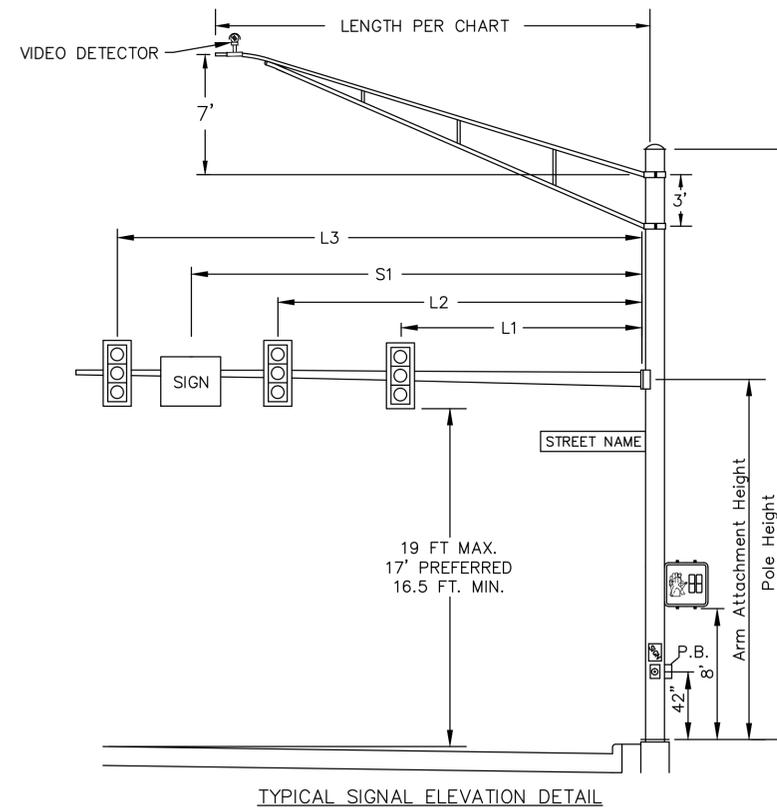
INTERSECTION	SHEET NO.	SUPPORT DESIGNATION	POLE COLOR	POLE DESIGN NO.	POLE HT. (FT.)	ARM LENGTH		OBJECT ATTACHMENT HEIGHT			DISTANCE FROM BUTT PLATE (FT.)			POLE FABRICATION DATA—CLOCKWISE FROM MAST ARM A AT 0 DEGREES							FIELD ORIENTATION		
						MASTARM (FT.)	VIDEO BRACKET ARM	MASTARM (FT.)	VIDEO BRACKET ARM	VIDEO DETECTOR MOUNTING HEIGHT	L1	L2	S1	VIDEO DETECTION CAMERA	ANCHOR BOLT REFERENCE LINE	PED. SIGNALS	PED. PUSH BUTTON	VIDEO BRACKET ARM	STREET NAME SIGNS	HANDHOLE	INDEX LINE ANGLE MAST ARM A	ANCHOR BOLT REF. LINE	FOUNDATION ELEVATION*
STREET A	##	S/E-1	Black	4	27'	32'	25'	21.5'	26'	33'	12.5'	23.5'	-	24'	90°	264°	255°	0°	0°/270°	180°	0°	90°	723.87
AT		S/E-2	Black	Pedestal	10.7'	-	-	-	-	-	-	-	-	-	90°	344°	-	-	-	180°	18°	108°	723.61
STREET C		S/W-1	Black	4	27'	32.5'	25'	21.5'	26'	33'	14'	24'	-	24'	90°	264°	-	0°	-	180°	90°	0°	723.62
		S/W-2	Black	Pedestal	10.7'	-	-	-	-	-	-	-	-	-	90°	347°	0°	-	-	180°	106°	16°	724.24
		N/W-1	Black	4	27'	32.5'	25'	21.5'	26'	33'	13'	24'	-	24'	90°	264°	257°	0°	0°/270°	180°	0°	90°	724.55
		N/W-2	Black	Pedestal	10.7'	-	-	-	-	-	-	-	-	-	90°	355°	-	-	-	180°	15°	105°	724.73
		N/E-1	Black	14	27'	50.5'	30'	21.5'	26'	33'	32'	42'	-	29'	90°	8°	5°	0°	-	180°	90°	0°	723.88
		N/E-2	Black	Pedestal	10.7'	-	-	-	-	-	-	-	-	-	90°	285°	-	-	-	180°	75°	165°	724.37



All angles measured clockwise.

Base plate is oriented square to Mast Arm A. Mast Arm A is the largest arm if the support has two mast arms.

TYPICAL SIGNAL SUPPORT ORIENTATION DETAIL



TYPICAL SIGNAL ELEVATION DETAIL

CALCULATED SCALE
XXX
CHECKED
XXX

POLE FABRICATION AND ORIENTATION DETAILS

PROJECT NAME

None